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NHTSA Crash Investigation Sampling System Event Data Recorder Data Element Benchmarking Study

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16. Abstract An event data recorder (EDR) is defined in 49 CFR Part 563 to mean a device or function in a vehicle that records the vehicle's dynamic time-series data during the time period just prior to a crash event (e.g., vehicle speed vs. time) or during a crash event (e.g., delta-V vs. time), intended for retrieval after the crash event. This data can be downloaded to help crash reconstruction or vehicle safety research. NHTSA established EDR requirements in 49 CFR Part 563 in 2012. Since the promulgation of the requirements, crash avoidance and advanced driver assistance systems (ADAS) technologies have expanded in market penetration. Some vehicle original equipment manufacturers (OEMs) are recording status and activation of these technologies during the time period prior to the crash event in their EDRs. This study observes which data elements are recorded beyond what is required by Part 563 since it went into effect. A query on 2022-2023 Crash Investigation Sampling System (CISS) case year data was conducted, then model year 2022-2024 vehicles were selected that had that information available for analysis. Fifteen vehicle OEMs met these criteria and were eligible for review. EDR reports were assessed to identify data elements OEMs were reporting from their EDRs. These were compared to two existing EDR standards. Data elements were also identified that were not incorporated in existing regulations or best practices and were unique to each OEM. All 15 OEMs were reporting all Part 563 Table I data elements, but reporting Part 563 Table II elements varied across OEMs. Large variation in the number of data elements beyond Part 563 reported across OEMs ranged from 9 to 405 additional elements. Some OEMs were found to be reporting certain data elements from UN R160 and SAE J1698, but there were differences across OEMs for which elements. Eleven similar elements were reported by at least two OEMs, with a maximum of 9 of 15 OEMs reporting a particular similar element.			
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Introduction

In 49 CFR, *Transportation*, Part 563, *Event data recorders*, an EDR means a device or function in a vehicle that records the vehicle's dynamic time-series data during the time period just prior to a crash event (e.g., vehicle speed vs. time) or during a crash event (e.g., delta-V vs. time), intended for retrieval after the crash event. Under this definition, event data does not include audio and video data. EDR data can be downloaded after the crash to help with crash reconstruction or vehicle safety research. NHTSA established requirements for EDRs if equipped on certain vehicles in 2006 through 49 CFR Part 563, effective on September 1, 2012.

Since then, crash avoidance technologies such as automatic emergency braking (AEB) and lane keeping assistance (LKA) have expanded in the market. Other advanced driver assistance systems (ADAS) technologies such as adaptive cruise control and lane centering systems perform part of the driving task. Many of these technologies are being offered as standard equipment on newer model year vehicles. Some vehicles sampled from original equipment manufacturers (OEMs) record status and activation of ADAS technologies prior to the crash event in their EDRs to give insight into vehicle operation and performance throughout a series of crash events.

Vehicles with hybrid and fully electric powertrains are also increasing in market penetration since Part 563 was first published. This study observes which data elements are being recorded beyond what is required by Part 563 since it became effective. We queried 2022-2023 Crash Investigation Sampling System (CISS) case year data, then model year (MY) 2022-2024 vehicles that had corresponding EDR reports available for analysis were chosen. Fifteen vehicle OEMs met these criteria and were eligible for further review. We assessed EDR reports to identify which data elements OEMs were reporting from their EDRs. These were then compared to two existing EDR standards, the United Nations Economic Commission for Europe (UNECE) (2021/2023) Regulation 160, *Uniform provisions concerning the approval of motor vehicles with regard to the Event Data Recorder*, and the most recent revision of SAE International's standard, J1698, *Event data recorder* (2023).” We also identified data elements that were not incorporated in existing regulations or best practices and were unique to each OEM.

We collected 22 EDR reports from MY 2022-2024 vehicles from CISS to support this study. The EDRs from 15 different OEMs were compared and analyzed, assuming the newest MY vehicle from these CISS cases would provide the most current indicator of the data elements OEMs are recording in their EDRs.

The EDRs from this study were independently evaluated. Each data element per EDR was categorized into four categories, Part 563, UN R160 (Additional), SAE J1698, or Other. This study confirmed all OEMs are reporting the data elements required by Part 563, Table I (Event data recorders, 2006, printed in 71 F.R. 166, on p. 51045). All OEMs are reporting 11 of the 31 data elements defined by Part 563 Table II (printed in 71 F.R. 166, on p. 51046), typically adopting data elements related to the crash event. There was large variation in the total number of data elements beyond Part 563 reported across OEMs, ranging from 9 to 405 additional elements. At the time of this study, although some EDRs were beginning to incorporate EDR data elements specified by UN R160 and SAE J1698, such as the status or activation of certain ADAS equipment, there did not appear to be broad commonalities across OEMs for these data elements. Of the OEM-specific data elements we studied, 11 elements determined to be similar

were reported by at least two OEMs. The most OEMs that reported any particular similar element was 9.

Additional observations showed there were variations across OEMs when reporting data for multi-event crashes and defining OEM-specific data elements. These differences may complicate how EDR data can be extracted, analyzed, and compared across all OEMs. A common EDR report template may also be helpful in organizing the data and harmonizing data interpretation and analysis. Thus, reducing variation may increase the utility and benefit of EDR data, ultimately supporting future advancements for motor vehicle safety.

49 CFR Part 563 Event Data Recorder Background and U.S. Requirements

EDRs have existed in the automotive industry with various recording capabilities since the mid-1970s, when General Motors introduced them in vehicles equipped with air bags. NHTSA first proposed EDR regulation in 2004, when OEMs had already begun voluntarily installing them as standard equipment in some light vehicles. NHTSA recognized that standardizing crash data collection and reporting requirements was essential to ensure this data could be used for purposes including crash reconstruction and vehicle safety research, among others. NHTSA estimated 64 percent of new light vehicles were already equipped with EDRs by 2006.

NHTSA established Part 563 in 2006, setting national, uniform requirements for vehicles with EDRs and taking full effect in 2012. It is an “if-equipped” requirement, meaning that Part 563 does not require OEMs to install EDRs. Rather, if OEMs do equip their vehicles with EDRs, they are subject to the specifications of Part 563. In 2022 NHTSA estimated that 99.5 percent of MY 2021 passenger cars and other vehicles with gross vehicle weight ratings (GVWR) of 3,855 kilograms (kg) (8,500 lb) or less have EDRs compliant to Part 563 (87 FR 37289, 2022).

Part 563 standardizes the collection, storage, and download capability of certain onboard motor vehicle crash event data. It specifies the data elements that an EDR must record in a crash and standardizes the parameters (format, duration, etc.) for these elements. It also sets minimum requirements for data survivability and requires OEMs to make commercially available tools or methods to download this data, allowing crash investigators and researchers to readily access it.

Part 563’s Table I, below, specifies 15 data elements that applicable vehicles with EDRs must record. However, Part 563’s Table II, *Data Elements Required for Vehicles Under Specified Minimum Conditions*, (printed in 71 F.R. 166, on p. 51046, and Table 3 in this report), is conditional, specifying that if any of the 30 data elements listed are *actively recorded* by the OEM, they are subject to the requirements outlined in Table II. There is no requirement for the OEM to record Table II data elements. All data elements in Tables I and II must be reported according to the range, accuracy, and resolution requirements specified by Table III (p. 51046 and 51047).

Much of the safety data modern vehicles record is not required to be recorded by the EDR (Staff, 2024). Many of the data elements in Table I and Table II cover vehicle crashworthiness-related information, such as air bag deployment times, seat track position, and safety belt status. Comparatively few data elements focus on crash avoidance features such as antilock braking system (ABS) and electronic stability control (ESC). The emphasis on crashworthiness aligns with the state of safety technology when Part 563 was issued and influenced the location of EDRs in air bag control modules (ACMs). The automotive industry has changed significantly since the EDR requirement was issued, prompting the question for how data recording

capabilities may be adapting to include the status and activation of crash avoidance technologies in modern vehicles.

Table 1. Data Elements Required for All Vehicles Equipped With EDRs¹

Data Element	Recording Interval / Time¹ (Relative to Time Zero)	Data Sample Rate (Samples per Second)
Delta-V, Longitudinal	0 to 250 ms or 0 to End of Event Time Plus 30 ms, Whichever is Shorter.	100
Maximum Delta-V, Longitudinal	0-300 ms or 0 to End of Event Time Plus 30 ms, Whichever is Shorter.	N/A
Time, Maximum Delta-V	0-300 ms or 0 to End of Event Time Plus 30 ms, Whichever is Shorter.	N/A
Speed, Vehicle Indicated	-5.0 to 0 sec	2
Engine Throttle, % Full (or Accelerator Pedal, % Full)	-5.0 to 0 sec	2
Service Brake, on/off	-5.0 to 0 sec	2
Ignition Cycle, Crash	-1.0 sec	N/A
Ignition Cycle, Download	At Time of Download. ³	N/A
Safety Belt Status, Driver	-1.0 sec	N/A
Frontal Air Bag Warning Lamp, on/off ²	-1.0 sec	N/A
Frontal Air Bag Deployment, Time to Deploy, in the Case of a Single Stage Air Bag, or Time to First Stage Deployment, in the Case of a Multi-Stage Air Bag, Driver	Event	N/A
Frontal Air Bag Deployment, Time to Deploy, in the Case of a Single Stage Air Bag, or Time to First Stage Deployment, in the Case of a Multi-Stage Air Bag, Right Front Passenger	Event	N/A

¹ Table 1 has been updated in 89 FR 102810.

Data Element	Recording Interval / Time¹ (Relative to Time Zero)	Data Sample Rate (Samples per Second)
Multi-Event, Number of Event	Event	N/A
Time From Event 1 to 2	As Needed	N/A
Complete File Recorded (yes, no)	Following Other Data	N/A

¹ Pre-crash data and crash data are asynchronous. The sample time accuracy requirement for pre-crash time is -0.1 to 1.0 sec (*e.g.*, T = -1 would need to occur between -1.1 and 0 seconds).

² The frontal air bag warning lamp is the readiness indicator specified in S4.5.2 of FMVSS No. 208 and may also illuminate to indicate a malfunction in another part of the deployable restraint system.

³ The ignition cycle at the time of download is not required to be recorded at the time of the crash but shall be reported during the download process.

Source: 71 F.R. 166, p. 51045

United Nations Economic Commission for Europe's Regional Requirements

UNECE's World Forum for Harmonization of Vehicle Regulations (WP.29) is a worldwide regulatory forum in the institutional framework of UNECE's Inland Transport Committee. Three UN agreements are the legal framework for establishing regulatory instruments for motor vehicles and their equipment. Much of WP.29's work occurs under two of them: (1) the 1958 Agreement, which sets forth the framework for creating UN regulations for some regions of the world (UNECE, 1958), and (2) the 1998 Agreement, which sets forth the framework for creating UNECE's global technical regulations (GTRs) (UNECE, 1998).

A WP.29 informal working group has been focused on EDRs since 2019. The United States became actively involved in September 2019 and has remained a key participant in the activities of the group. These activities have resulted in the creation of several UN regulations. The most relevant to this study is UN R160 rev 1, which focuses on what the U.S. refers to as light duty vehicles (UNECE, 2023). As is common with UN regulations, UN R160 has been updated several times to account for a variety of changes and requests from contracting parties.

Much of UN R160 is similar to Part 563. For example, UN R160 applies to a similar cohort of vehicles as Part 563. However, there are two key differences. First, more recent versions of UN R160 include several data elements that are not currently included in Part 563 (UNECE, 2022). Second, the current version of UN R160 adopts other triggering events for the capturing, recording, and locking of data in EDRs.

Two trigger thresholds were added to UN R160 at the request of another contracting party: changes in (1) longitudinal or (2) lateral vehicle velocity of more than 8 km/h within 150 milliseconds or less. These trigger thresholds were added because some contracting parties have vehicles that do not have non-reversible occupant restraint systems (air bags), while Part 563 uses air bag deployment as its primary trigger for recording or locking data. If air bags are not present in a vehicle, velocity triggers are designed to capture and record crash events.

UN R160 also includes at least eight data elements related to various steering functionalities.²

² The eight different steering elements are: (1) Automatically commanded steering function category A; (2) Automatically commanded steering function category B1; (3) Automatically commanded steering function category B2; (4) Automatically commanded steering function category C; (5) Automatically commanded steering function

Industry Standards

Industry standards for EDRs have played an important role in the development of regulatory frameworks throughout the world, including the United States. The first such standard was SAE J1698, introduced in 2003 to reconcile and standardize EDR data recorded among different OEMs (SAE International, 2003). Specifically, SAE J1698-1, *Event data recorder – Output data definition* contains data elements, while other parts of the recommended practice deal with retrieval tool protocol and compliance assessment. SAE J1698-1 listed 58 data elements that were either recorded by OEMs at the time or were expected to be recorded in the future (pp. 9-12). The intent was to specify a common format for reporting these data elements. SAE J1698 did not place any requirements on the method of recording or on the format of data stored onboard the vehicle (pp. 2-3). Since its start, the scope of the standard has expanded to cover not only output data, but also data download and compliance assessment.

The original rule that established Part 563 drew heavily on requirements found in the 2005 edition of SAE J1698 (Event Data Recorders, 2006) but Part 563 has not been updated to incorporate the additional data elements that have come with later revisions of the SAE standard. For instance, the most recent edition of the SAE J1698, published in 2023, contains data elements relevant to the activation of crash avoidance systems such as AEB, LKA, and blind spot warning/intervention (BSW/BSI) (SAE International, 2023, pp. 16, 17, 27). It also includes data elements for driver assistance features such as ACC.³ SAE J1698 also added a Pedestrian Impact Events category (p. 8), where activation of a pedestrian crashworthiness protection system is the triggering event for these recordings.

category D; (6) Automatically commanded steering function category E; (7) Corrective steering function; and (8) Emergency steering function.

³ Refers to both SAE Level 1 and Level 2 features, as per SAE J3016.

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Purpose and Objective

Part of NHTSA's CISS, Special Crash Investigations, and Crash Injury Research and Engineering Network programs involve trained crash technicians downloading copies of EDR data,⁴ when available for involved vehicles, for each case to better understand the status of the vehicle in the time leading to and throughout a crash event. These technicians then report the EDR data elements to their respective crash databases. Analyzing EDR data collected through these crash investigation programs has allowed NHTSA to see data elements reported by OEMs not defined in Part 563. As vehicle technology continues to evolve, such data may be useful for understanding when and how certain vehicle safety systems are operating, especially for those designed to avoid or mitigate crash events.

NHTSA conducted this study to find and document how OEMs currently implement the EDR requirements specified by Part 563 and catalogue the data captured beyond these current requirements. The data identified during this study includes (1) administrative information such as equipment part numbers and software versions, (2) pre-crash vehicle data including the status of crash avoidance technologies and other vehicle systems (i.e., tire pressure at each wheel), and (3) post-crash crashworthiness information on systems not specified by Part 563, such as knee air bag deployment times. EDR reports were also compared to their peers and variations noted.

⁴ The equipment cost for the commercially available tool to support EDR data collection across 40 CISS sites from Bosch, Hyundai/Kia and Tesla, is approximately \$1,800,000.

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Method

We conducted a query on publicly available 2022-2023 CISS case year data (NHTSA, n.d.), then chose MY 2022-2024 vehicles that had corresponding EDR reports available for analysis. Fifteen OEMs met these criteria and were eligible for further review.⁵ Within this dataset, we selected the newest vehicle MY case available per OEM, assuming this would indicate the most current data elements these OEMs are recording in their EDRs.⁶ We then downloaded corresponding EDR reports for the chosen case vehicles. In instances where a particular OEM had multiple newest MY vehicle candidates available in CISS, several EDR reports were selected and then pre-screened to ensure that the most-representative report was chosen. If significant differences in data elements were noted during this pre-screen, multiple models may have been selected for review from the same OEM. Generally, EDR selection priority was given to vehicle models in an OEM that appeared to have the most recent EDR version, or that contained more unique data elements than what is defined in Part 563. The 22 vehicle EDRs used for this study, organized by OEM, MY, and model, are listed in Table 2.

Table 2. Vehicles Chosen for EDR Benchmarking Study

OEM	Model Year	Model
BMW	2023	X3
Daimler	2022	C-Class
Ford	2022/2023/2023	Edge, Escape, Bronco Sport
GM	2023	Escalade
Honda	2024	Civic
Hyundai	2022	Ioniq 5
Mazda	2024	CX-90
Mitsubishi [†]	2023	Outlander
Nissan	2023	Rogue
Stellantis	2023	Grand Cherokee, Pacifica, 1500, Gladiator
Subaru	2024	Crosstrek
Tesla	2023	Model Y
Toyota	2023/2024	GR86, Rav4
Volkswagen	2022/2023	ID.4, Q5
Volvo	2023	XC60

⁵ OEM selection was limited to what was available in CISS per defined criteria at the time of the study. Some lower volume manufacturers are excluded based on there being no applicable CISS cases available.

⁶ After completing this study, we became aware of a Toyota CISS case that showed the newest model year vehicle is not always equipped with the newest generation of EDR. For example, the 2022 Toyota Tundra from CISS Case Number 1-12-2022-025-04 is equipped with EDR generation 19EDR and incorporated ADAS data elements, while the 2024 Toyota Rav4 used in this study has a 17EDR which did not. This study limitation may be applicable for other OEMs listed in Table 1.

We reviewed the selected EDR reports and manually extracted all reported data element names into a spreadsheet for comparison across the OEMs. Each data element was categorized as one of the following:

1. 49 CFR Part 563. Data elements specified by Tables I or II of the stated regulation.
2. UN R160 (Additional). Data elements included in the current UN R160 that are not specified by 49 CFR Part 563.
3. SAE J1698. Data elements specified by J1698, which is the SAE Recommended Practice for Event Data Recorders.
4. Other. These data elements are not currently identified by 49 CFR Part 563, UN R160 (Additional), or SAE J1698, but are similar and present across multiple OEMs.

Notably, certain “Other” data elements did not typically use the same terminology across different OEMs. If we determined that a data element was used across OEMs but with different terminology, a common definition was specified.⁷ For example, “Knee bolster air bag deployment, time to fire, driver” is the common data element definition used in this report, while BMW’s EDR specifies “Knee bag, time to deploy, driver and front passenger” and Subaru’s EDR specifies “Knee air bag, time to deploy, driver.” The complete mapping for the common data elements used in this study is found in Appendix A. The CISS case numbers and select EDR exemplar files associated for each of the vehicles specified below are included in Appendices B and C.

The data presented in this study are reported in aggregate by data element category. They are further analyzed to assess which elements OEMs are recording in their EDRs and compare reported elements to existing EDR requirements and recommended practices.

⁷ The terminology used in this report to define each of the listed “Other” data elements is not intended to be adopted as standardized nomenclature. Rather, it is specific for use in this study and highlights future data element consolidation efforts across OEMs, which is outside the scope of this study.

Limitations

The scope for this study acknowledges the known variations of EDR data reporting across OEMs. It also recognizes there are differences in EDR data among different vehicle models in the same OEM, and possibly even in the same vehicle model across MYs. From pre-screening, there were instances where EDR data for a selected vehicle appeared to be specific to trim level and/or optional equipment package. For example, some data elements may be specific to hybrid or electric powertrain systems. Generally, only 1 or 2 vehicles were selected for assessment per OEM, this study may not comprehensively report all data elements that an OEM may be capturing in their respective EDRs across their fleets. However, by filtering for more recent MY vehicles with more recent EDR versions and knowing that EDR versions are often shared amongst many models for a given OEM, the sample chosen should be largely representative for the later MY vehicles studied.

Vehicle data collected and stored in other vehicle modules or that require OEM proprietary tools and software to extract data are outside of the scope for this study. The focus of the study was *data elements reported*. These reported elements may not fully represent *all elements recorded* to the EDR or other modules onboard the vehicle that cannot be accessed with a standard imaging tool. However, it can be assumed that if an element was reported from the EDR at imaging, it was recorded to the EDR at the time of the triggering event or retrieval.

CISS cases considered for this study were not controlled by crash type. The data elements reviewed per OEM in the selected EDR reports were not further assessed or categorized for data elements that may only be recorded or reported for certain crash types. For example, a vehicle involved in a purely longitudinal crash event may not record roll angle to the EDR during the event, or the OEM may not report any crash data elements for side or rollover crash events even if they were recorded. Therefore, care should be taken when interpreting results about data elements that were not reported during the analyses.

Some OEMs appear to report certain EDR data elements that are conditionally recorded if the relevant Supplemental Restraint System (SRS) was commanded to deploy. Two of the three Ford EDRs (2023 Ford Bronco and 2023 Ford Escape), for example, did not have a right front seat passenger present during the reported crash event. Therefore, the required Part 563 Table I data element “Frontal air bag deployment, time to deploy, in the case of a single stage air bag, or time to first stage deployment, in the case of a multi-stage air bag, right front passenger” is not present in these EDR reports. However, the 2022 Ford Edge for this study did have a front seat passenger present during the crash event and the right front passenger air bag was commanded to deploy. The corresponding right front passenger air bag deployment times are present in this 2022 Ford Edge EDR report.

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Data Element Analysis Results

Results from this study show OEMs are reporting data elements following the specifications of 49 CFR Part 563. Some data elements defined by UN R160 and SAE J1698 are also being implemented across OEM EDRs, but to a lesser extent. As newer EDR generations become prominent across newer vehicle fleets, OEMs may incorporate additional UN R160 and possibly SAE J1698 data elements.

Part 563 Table I and Part 563 Table II Data Elements

All 22 EDRs evaluated, which represented the 15 OEMs observed through this study, are reporting all 15 data elements required by Table I of 49 CFR Part 563.7. However, it was seen in a few EDR reports that some OEMs are using different terminology than the labels specified in Part 563. One example is that BMW lists “Time from Initial Event to Current Event” and “Time from Previous Event to Current Event,” presumably to capture the Part 563 data element “Time from event 1 to 2.” These OEM data elements highlight the intent to record at least two crash events, while also providing the means to record and map to more complex multi-event crashes.

There is variation in the number of OEMs reporting Part 563’s Table II’s data elements from their EDRs, shown in Table 3 below. All 15 OEMs assessed in this study are reporting 11 of the 31 data elements in Part 563’s Table II from their EDRs. The data elements reported by more than 75% of the OEMs assessed in this study are predominantly focused on deployment time and status for SRS systems. They also include elements related to the vehicle’s crash dynamics and kinematic trajectory, such as acceleration, stability control, and steering input. Less than 50% of OEMs are reporting “Occupant position classification, right front passenger” and “Occupant size classification, driver.” The data element “Maximum delta V, resultant,” reported by only 2 OEMs, is listed solely by Part 563.5 Definitions — it does not appear as a required data element in Tables I or II, and the reported data element format is not specified in Part 563’s Table III. No OEMs are currently reporting “Occupant position classification, driver.”

Table 3. Percentage Range for OEMs Reporting Part 563 Table II Data Elements Required for Vehicles Under Specified Minimum Conditions

% of OEMs Reporting Data Element	Table II Data Element
All	Delta V, Lateral
	Maximum Delta V,L
	Time Maximum Delta V, Lateral
	Safety Belt Status, Right Front Passenger
	Frontal Air Bag Deployment, Time to Nth Stage, Driver
	Frontal Air Bag Deployment, Time to Nth Stage, Right Front Passenger
	Side Air Bag Deployment, Time to Deploy, Driver
	Side Curtain/Tube Air Bag Deployment, Time to Deploy, Driver Side
	Pretensioner Deployment, Time to Fire, Driver
	Pretensioner Deployment, Time to Fire, Right Front Passenger
	Occupant Size Classification, Right Front Passenger
More Than 75%, Less Than 100%	Lateral Acceleration
	Longitudinal Acceleration
	Engine RPM
	ABS Activity
	Stability Control
	Steering Input
	Frontal Air Bag Suppression Switch Status, Right Front Passenger
	Side Air Bag Deployment, Time to Deploy, Right Front Passenger
	Side Curtain/Tube Air Bag Deployment, Time to Deploy, Right Side
	Seat Track Position Switch, Foremost, Status, Driver
More Than 50%, Less Than 75%	Normal Acceleration
	Time for Maximum Delta V, Resultant
	Vehicle Roll Angle
	Frontal Air Bag Deployment, Nth Stage Disposal, Driver, Y/N (whether the nth stage deployment was for occupant restraint or propellant disposal purposes)

% of OEMs Reporting Data Element	Table II Data Element
	Frontal Air Bag Deployment, Nth Stage Disposal, Right Front Passenger, Y/N (whether the nth stage deployment was for occupant restraint or propellant disposal purposes)
	Seat Track Position Switch, Foremost, Status, Right Front Passenger
Less Than 50%	Occupant Size Classification, Driver
	Occupant Position Classification, Right Front Passenger
	Maximum Delta V, Resultant
None	Occupant Position Classification, Driver

Data Elements Reported by OEMs

Figure 1 below shows that all OEMs assessed through this study are recording some data in their EDRs that are not in Part 563 Tables I and II. There is large variation across OEMs, ranging from as few as 9 to as many as 405 additional data elements.

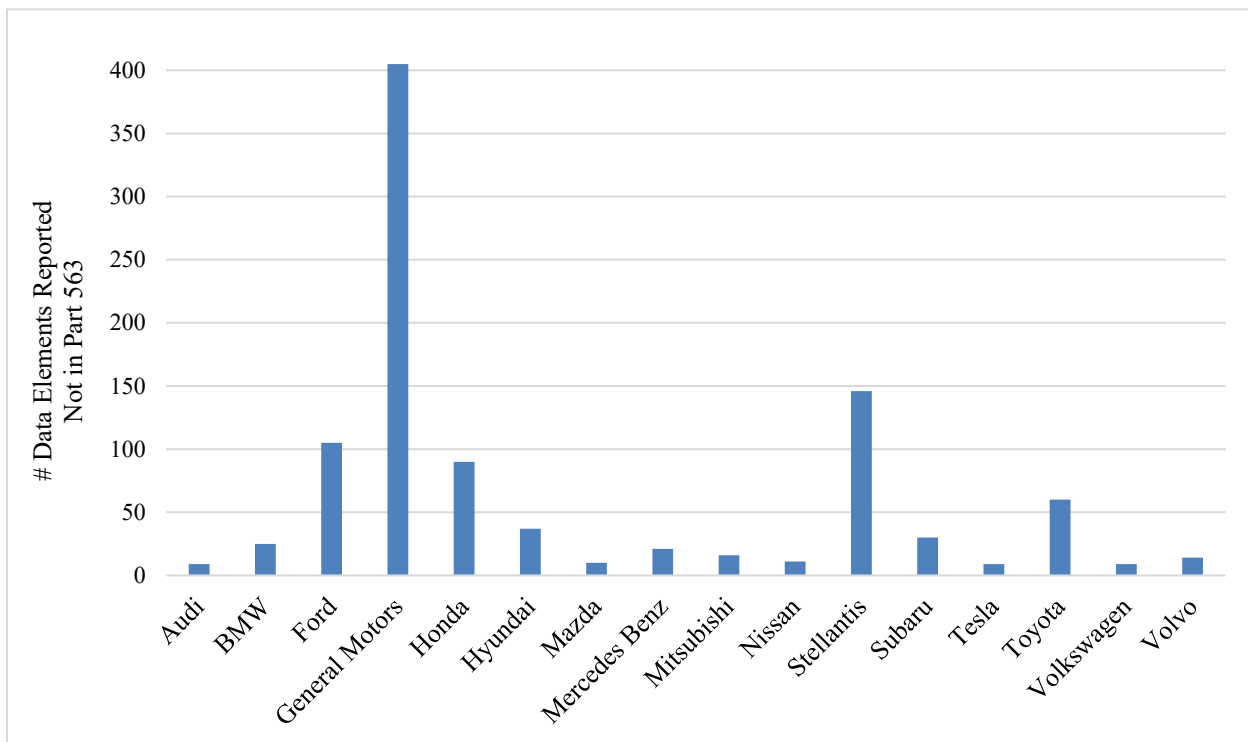


Figure 1. Total Number of Data Elements Reported by OEMs Not in Tables I and II of Part 563⁸

⁸ This study included GM's most comprehensive EDR included on vehicle equipped with both lane centering and adaptive cruise control functionality. The EDR data is contained in three different modules, requires three different downloads, using one Bosch CDR tool.

OEM Alignment of Data Elements to SAE and UNECE Not Included in Part 563

This section focuses on data elements that are included in SAE J1698 and UN R160 but are not included in Part 563.

Data Elements Reported by OEMs

SAE J1698 and UN R160 have collectively identified 62 data elements for inclusion in EDR reporting that are not included in Part 563. A list of the data elements analyzed is presented in Appendix A. Eleven⁹ of these data elements are similar between SAE J1698 and UN R160, listed in Table 3.

The most often reported data element is “Adaptive Cruise Control Status.” Many OEMs are reporting “Automatic Emergency Braking System Status,” “Safety belt status, rear passengers,” “TPMS Warning Lamp Status,” “Vehicle Roll Rate,” and “Yaw Rate.”

Table 4. OEMs Reporting Similar Data Elements Between SAE J1698 and UN R160

% of OEMs Recording Data Element	Data Element¹⁰
More Than 50%, Less Than 75%	Adaptive Cruise Control Status
More Than 25%, Less Than 50%	Automatic Emergency Braking System Status
	Safety Belt Status, Rear Passengers
	Tire Pressure Monitoring System Warning Lamp Status
	Vehicle Roll Rate
	Yaw Rate
Less Than 25%	Lane Departure Warning System Status
	Safety Belt Status, Mid-Position Front
	Status of Traction Control System
	Vulnerable Road User Secondary Safety System Deployment, Time to Deploy
	Vulnerable Road User Secondary Safety System Warning Indicator Status

⁹ UN R160 explicitly specifies “Safety belt status, rear passengers” and “Safety belt status, mid-position front” as two separate data elements, but defines “Safety belt status” as a singular definition, independent from seating position.

¹⁰ SAE J1698 and UN R160 have similar but different names for some of these elements. The data element names appearing in this table and elsewhere in the analysis for common elements were chosen as the most descriptive. In some cases, slight changes in wording for clarity for the purpose of this report were made.

Figure 2 shows the number of OEMs reporting SAE J1698 and UN R160 data elements. This set of data elements is different from that shown in Table 4, as it includes the 11 data elements that are similar between SAE J1698 and UN R160 from Table 4, as well as data elements unique to SAE J1698 and UN R160 separately. The figure does not show elements from this set reported by two or fewer OEMs. The data elements for each category shown in the columns of Figure 2 are unique and mutually exclusive.

For example, the first column in Figure 2 shows that 8 OEMs report one similar data element, Adaptive Cruise Control Status. Seven report three similar data elements: Cruise Control Status, Automatic Emergency Braking System Status, and Safety Belt Status, Rear Passengers. Additionally, 6 OEMs report Gear Selection Status and Vehicle Roll Rate.

Appendix A provides a complete table of the data elements along with the number of OEMs and respective similar data elements in their reports.

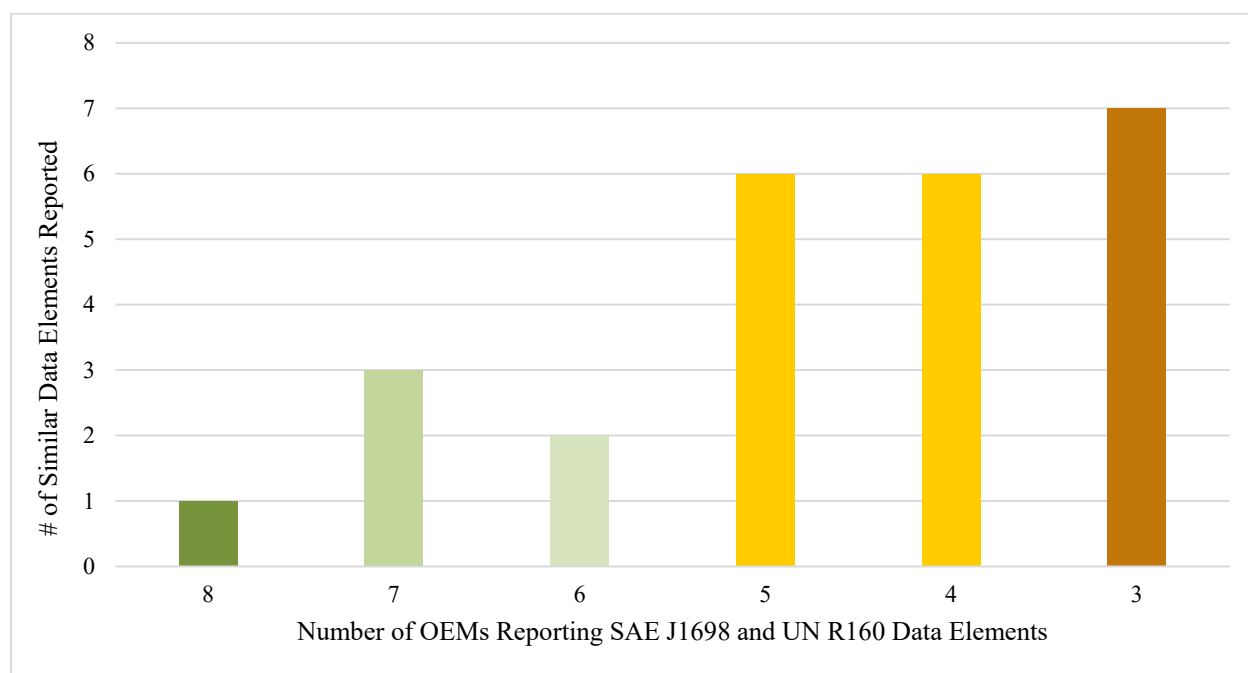


Figure 2. Reporting of SAE J1698 and UN R160 Data Elements by OEM

Figure 3 shows the types of data elements reported by category. This data set includes elements from SAE J1698 or UN R160 reported by at least one OEM. OEMs are reporting 10 administrative data elements, 21 pre-crash vehicle data elements (5 of which are ADAS related), and 13 crashworthiness data elements.

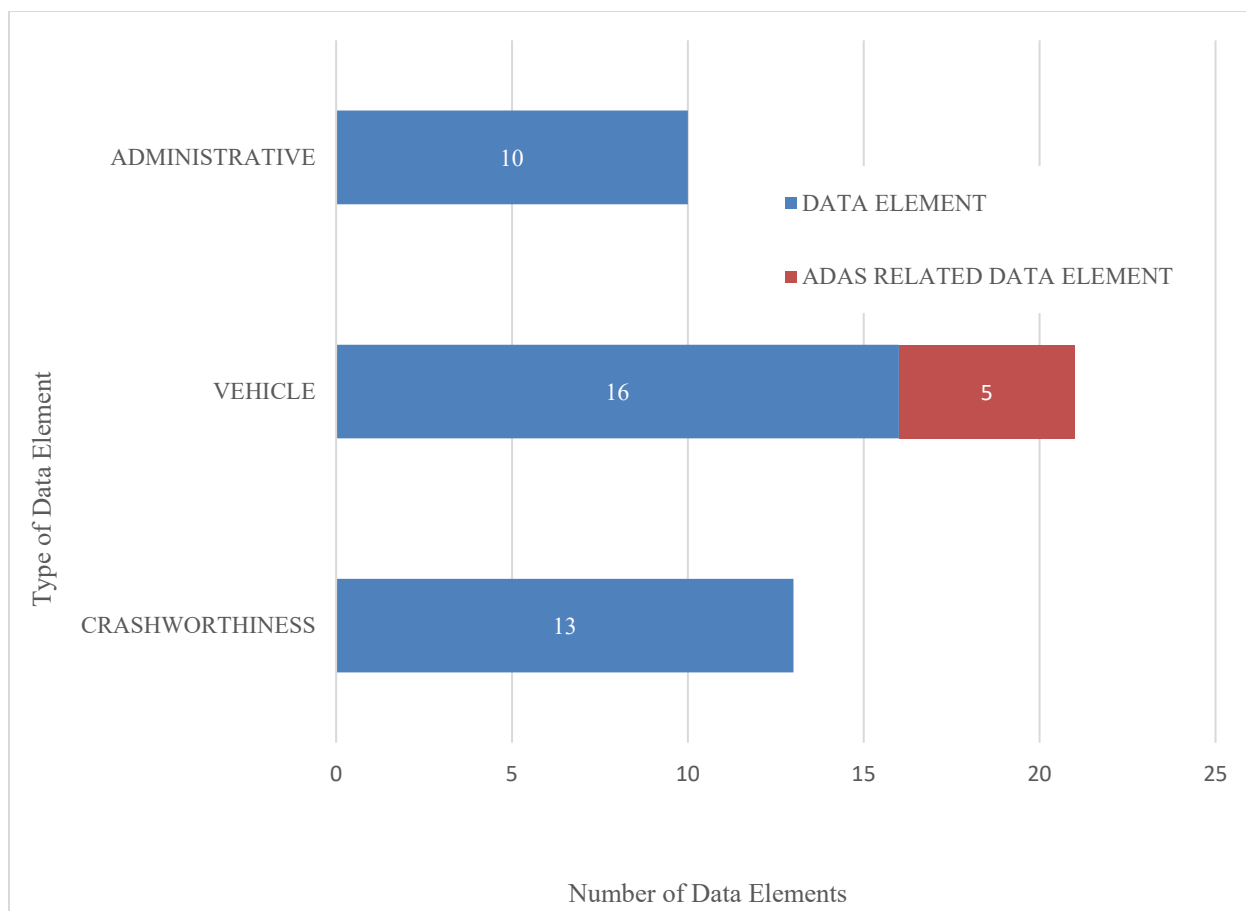


Figure 3. Categorization of SAE J1698 and UN R160 Data Elements Reported by OEM and Type

Examples of data elements by category are provided in Table 5 below, with the comprehensive categorization listed in Appendix A. The section ADAS Related Data Elements contains more details about the ADAS-related data elements highlighted in Figure 3.

Table 5. Example of SAE J1698 and UN R160 Data Elements by Category

Administrative	Pre-Crash Vehicle	Crashworthiness
Ambient Temperature	Status of Traction Control System	Far Side Impact Center Air Bag
ECU Life Timer at Event	Brake Pedal Position	Event Type
Event Date/Time Stamp	Parking Brake Status	Occupant Protection Pressure Sensor
Latitude and Longitude	*Adaptive Cruise Control Status	Knee Bolster Air Bag Deployment
ECU Part Number	*Lane Departure Warning System Status	Pretensioner, Time to Deploy

*Examples of vehicle data elements that are further sub-categorized as ADAS-related

Data Elements Not Reported by OEMs

The data elements listed in Table 6 are specified in UN R160 and SAE J1698 but were not reported by any of the EDRs analyzed for this study. Note that, although these EDR reports were the most modern available for this study at the time, obtained from MY 2022-2024 vehicles. Data elements for UN R160 Rev. 1 were formalized in calendar year 2023.

Table 6. Data Elements in UN R160 or SAE J1698 but Not Reported by OEMs

UNECE	SAE
Accident Emergency Call System Status	Braking Request (by Driver or Vehicle)
Automatically Commanded Steering Function Category (A, B1, B2, C, D, E) Status	Ignition Button Counter per Power Cycle
Steering Intervention Status	Mass Airflow
Corrective Steering Function Status	Minutes in Operation at Event
Emergency Steering Function Status	Number of Cycles Occupant/Pedestrian Protection System Warning Lamp Has Been On
	Occupant Protection Pressure Rate of Change
	Vehicle Yaw Angle
	Windshield Wiping System Status

OEM-Specific Data Elements

The data elements compiled in this section are not included in Part 563, SAE J1698, or UN R160 and therefore, specific to OEMs. We identified 11 similar data elements that have been adopted by several OEMs in the study. The most common OEM-specific data element reported is related to the post-crash deployment of the knee bolster air bag: nine OEMs reported this data element for the driver and 8 OEMs reported this data element for the front seat passenger. Five OEMs reported the post-crash pretensioner deployment time.

Five OEMs reported vehicle information with respect to diagnostic trouble codes and 4 reported the status of the turn signal lamps. It was also seen that OEMs are starting to report data on electrified vehicles such as battery voltage (reported by 3 OEMs) and “e-Pedal” status¹¹ (reported by 2 OEMs).

¹¹This is a marketing term for one-pedal driving mode on an electric vehicle. For one OEM, e-Pedal is defined as “e-Pedal allows drivers to accelerate, decelerate, and stop the vehicle using only the accelerator pedal.”

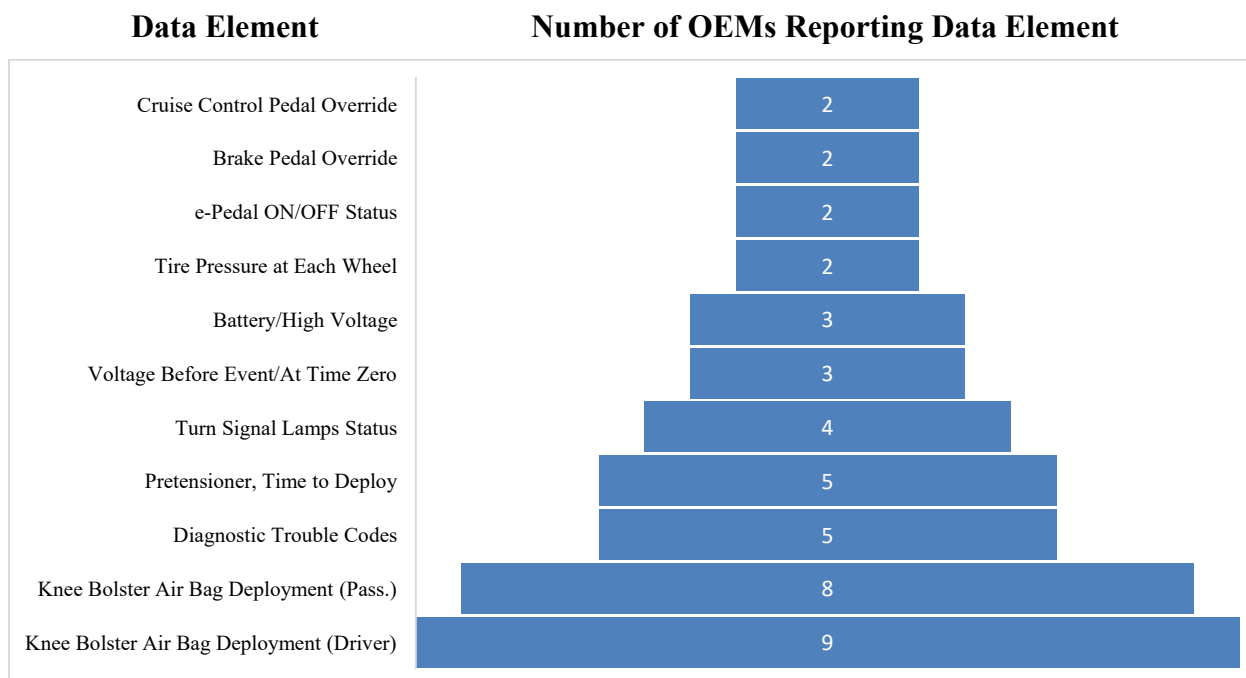


Figure 4. OEMs Reporting Similar Data Elements Not Defined in Part 563, SAE J1698 and UN R160

ADAS Related Data Elements

A breakdown of the number of OEMs reporting the five ADAS related data elements highlighted in Figure 3 is provided in Figure 5 below. Note that this list is restricted to ADAS related data elements included in SAE J1698 or UN R160.

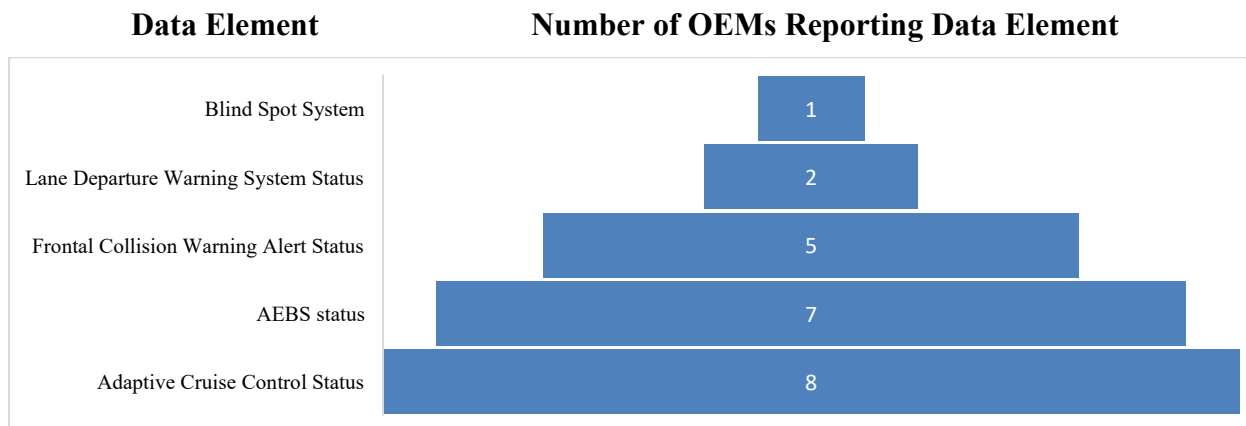


Figure 5. OEMs Reporting ADAS Related Data Elements Defined in SAE J1698 or UN R160

There were no OEM-specific, similar data elements (as presented in Figure 4) related to ADAS that were reported by two or more OEMs in the set of vehicle EDRs analyzed for this study. There were many OEM-specific ADAS data elements that were unique to each OEM. For example, the Honda EDR output contained data elements for the status and activation of other ADAS functions like LKA. The GM EDR output contained ADAS data elements beyond system status and activation, including details of perception of relevant objects detected by the systems.

Observations

Since Part 563 became fully effective, OEMs have begun recording additional data in their EDRs – in addition to elements in Part 563, UN R160, and SAE J1698 – with terminology that is not consistent across OEMs. This may lead to misinterpretation of the additional data elements and could require specialized training, per OEM, to accurately interpret and use EDR data.

Data Elements and Terminology

Terminology for data elements specified by Part 563, UN R160, and SAE J1698 was generally consistent across OEMs. However, the EDRs reports reviewed in this study indicate many OEMs have not incorporated certain SAE J1698 and UN R160 data elements, and there was variation across OEMs for the actual number of data elements reported. However, all OEMs reported additional information beyond the required Part 563 data elements.

Although many OEMs have expanded the data recorded to and reported from their EDRs, terminology across OEMs outside existing requirements and recommended practices varied, especially for ADAS technologies. OEM-specific marketing names may be used to describe the status, warning, and/or activation of this technology in the EDR report, therefore requiring additional information such as an owner's manual to interpret what the specific data element represents. Results presented in the preceding section related to similar OEM-specific data elements should be considered with acknowledgement that terminology differences had to be interpreted by the research team.

For example, the terminology intended to represent forward collision warning was reported differently for these three EDRs.

- Honda: "Collision Mitigation Braking System, Forward Collision Warning (Warning/Not Warning)"
- GM: "FCA Alert Request Status"
- Hyundai: "Forward Collision-Avoidance Assist (Function status)"

Differences also existed among current standards and best practices. For example, the data element for the automatic emergency braking system in UN R160 is "AEBS Status," with resolution specified as: Actively Warning, Actively Engaged, Faulted, Off, or Not Active. However, SAE J1698, separates warning and activation of AEB into two distinct data elements: "Collision Warning System" (resolution: On but not warning, off, faulted, or warning) and "Automated Emergency Braking" (resolution: Active or Not Active). This indicates not only a difference in terminology and structure of data elements representing a single system but highlights how resolution and values for similar elements may not be comparable depending on the OEM strategy.

OEMs have been incorporating more pre- and post-crash event data elements, but they are typically not defined in the EDR report and require additional research or OEM outreach to interpret. For example, these data elements were not defined in their EDR reports.

- Ford - AEB steering rate override
- BMW (and others) - Maximum Delta V, Resultant²
- Honda - EV mode

- GM - ACC axle torque request active
- Tesla - Driver load limiter
- Toyota - Wheel cylinder pressure front LH and RH
- Stellantis - Object of interest distance (m)

OEMs that do define data elements reported beyond standards and best practices typically include their explanations in the EDR's "Data Limitation"¹² section, which enables further data analysis and research efforts.

There were also instances seen where OEMs reported data elements that appeared to have similar intent to the UN R160 or SAE J1698 data elements, yet the OEM used their own data values or resolutions. The EDR for the Nissan Rogue, for example, reports "AEB/FCW switch status" with the resolution ON/OFF for their AEBS/forward collision warning system. Although this data element is distinct from UNECE's "AEBS Status" and SAE J1698's "Collision Warning System," Nissan does define its data element in the Data Limitations section of their EDR.¹³ Given the absence of data element terminology standardization, providing data element definitions in reports may decrease the likelihood of data misinterpretation.

Multi-Event EDR Reports

Multi-events in 49 CFR Part 563 are defined as the occurrence of two events, the first and last of which begin not more than 5 seconds apart. Part 563 requires the number of events and time between events to be reported to the EDR output file and up to two events should be captured and locked.

This study observed that OEMs may have been interpreting this Part 563 "multi-event" definition differently in addition to recording more than the required two events. While multi-event information generally still provided an informative time history of the crash sequence, variation in recording multi-event data required OEM specific knowledge and experience to understand how each OEM reports the time-history for multi-event data.

A single record imaged from an EDR may have two or more recorded events that include deployment events and other non-deployment triggering events that occurred at different times. Part 563's multi-event crash definition does not specify the time sequence or ordering in the report for multi-event records and so, unsurprisingly, there was variation seen in how OEMs report this data. Some OEMs reported the oldest triggering event (TRG) captured first, while others reported the "most recent" triggering event first. Consider an example of an OEM recording three events that occur in this sequence: (1) curb strike first exceeding the TRG threshold without an air bag deployment, (2) then striking another vehicle that triggers air bag deployment, and (3) finally a rollover triggering air bag deployment. One OEM may present the sequence of events with the oldest event first: TRG 1 - curb, TRG 2 – vehicle impact, and

¹² All EDR reports observed included a Data Limitation section that is not required under Part 563. Generally, this section of the report provides guidance on how to interpret data elements such as definitions and sign conventions, however, it is not always comprehensive. The Data Limitations section also includes a revision number, which may clarify items in more recent versions of software.

¹³ Definition for Nissan's AEB/FCW switch status: Indicates whether the switch of "Automatic Emergency Braking or Forward Collision Warning controlled by ADAS unit" was ON, or OFF at the time of the event. This data will not be available for all vehicles.

TRG 3 - rollover. Alternatively, another OEM may report the same crash sequence with the most recent event first, where TRG 1 is the rollover, TRG 2 is the vehicle impact, and TRG 3 is the curb strike. This variation in sequencing and display of multi-event records makes it difficult to interpret the order and relevance of actual events, which is critical for crash reconstruction. Notably, both observations are consistent with the regulatory text. With more than two events recorded by some OEMs, it is more likely to encounter non-deployment events stored in the EDR that did not occur within the 5 seconds defining a multi-event sequence. In these cases, the complexity of multi-event sequencing in addition to older, non-deployment events present in the EDR image may make it difficult to interpret for crash reconstruction.

Report Format

EDR report formats at a high level were generally consistent among OEMs especially for single event reports. However, the order that the required data elements are presented in the EDR report is left to OEM discretion and is therefore not standardized. Some OEMs elected to present their pre-crash data before post-crash data (i.e. air bag deployment). Others presented the post-crash data before pre-crash data. These differences are further complicated when analyzing and interpreting multi-event reports as discussed in the previous section.

Variation observed across OEMs for EDR reports also included section and table headings. The complexity is further compounded as OEMs are collecting and reporting more data elements and using multiple tables to present the data.

As discussed in the Limitations section, the CISS cases selected were not controlled for crash type, and some OEMs only reported data elements conditional on the specific crash event recorded. If a side or rollover crash event was not detected by the vehicle EDR during a relevant longitudinal crash event, for example, the OEM may not report the side or rollover crash data elements to the EDR. These events were not detected and therefore were not applicable to the relevant crash event. However, some OEMs reported and presented all data elements the EDR is capable of recording, regardless of the crash type detected. OEMs may report these data element values as not applicable, blank fields, or similar placeholders to indicate this data was not deemed relevant for the detected crash type.

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Conclusion

Twenty-two EDR reports from MY 2022-2024 vehicles were collected from CISS cases to support this study. The 22 EDRs from different vehicle models from 15 OEMs were compared and analyzed. We assumed the newest MY vehicle from these CISS cases gave the most current indicator for the types of data elements a given OEM is recording to its EDRs.

This study observed data elements reported by OEMs beyond what is required by Part 563. The EDRs from this study were independently evaluated. Each data element per EDR was categorized as Part 563, UN R160 (Additional), SAE J1698, or Other.

We confirmed all OEMs are reporting the data elements required by Part 563 Table I. All OEMs reported 11 of the 31 data elements defined by Part 563 Table II, typically adopting data elements related to the crash event. There was large variation in the total number of data elements beyond Part 563 reported across OEMs, ranging from 9 to 405 additional elements. Although some EDRs are beginning to incorporate additional data elements specified by UN R160 and SAE J1698, such as the status or activation of certain ADAS equipment, there did not appear to be widespread commonality or adoption across OEMs for these data elements at the time of this study. Of the OEM-specific data elements studied, 11 elements determined to be similar were reported by at least 2 OEMs. The most OEMs that reported any particular similar element was 9.

Additional observations from this study showed that there were variations across OEMs when reporting data for multi-event crashes and defining OEM-specific data elements. These differences may complicate how EDR data can be extracted, analyzed, and compared across all OEMs. A common EDR report template may also be helpful to organize the data, harmonizing data interpretation and analysis. Thus, reducing variation may increase the utility and benefit of EDR data, ultimately supporting future advancements for motor vehicle safety.

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Appendix A: Priority Data Elements Outside Part 563 Categorized by Source and Type

Data Element	Source¹	Type²	Number of OEMS Reporting Data Element
Adaptive Cruise Control Status	UNECE + SAE	ADAS	8
AEBS Status			7
Lane Departure Warning System Status			2
VRU Secondary Safety System Warning Indicator Status		CRASH	1
Safety Belt Status Mid-Position Front			1
Safety Belt Status, Rear Passengers			7
VRU Secondary Safety System Deployment, Time to Deploy			1
Status of Traction Control System		VEHICLE	3
TPMS Warning Lamp Status			4
Vehicle Roll Rate			6
Yaw Rate			5
Far Side Impact Center Air Bag	UNECE	CRASH	3
Lateral Acceleration (post-crash)			4
Lateral Acceleration (pre-crash)			3
Longitudinal Acceleration (post-crash)			4
Longitudinal Acceleration (pre-crash)			3
Cruise Control Status		VEHICLE	7
Blind Spot System	SAE	ADAS	1
Frontal Collision Warning Alert Status			5
Ambient Temperature		ADMIN	1
ECU Life Timer at Event			5
ECU Life Timer at Imaging			1
ECU Power Applied			3
ECU Serial Number			3

Data Element	Source ¹	Type ²	Number of OEMS Reporting Data Element
Event Date/Time Stamp			2
Latitude			1
Longitude			1
ECU PartN			5
ECU Software Part Number			5
Event Type		CRASH	4
Occupant Protection Pressure Sensor			2
Passenger Frontal Air Bag Disabled Indicator Status			1
Sensor Design Range Exceeded, XX			4
Brake Pedal Position		VEHICLE	3
Brake System Internal Pressure			5
Brake Warning Indicator Status			2
Electronic Stop Start			2
Gear Selection Status			6
Manifold Absolute Pressure			1
Parking Brake Status			1
Powertrain Control Module Malfunction Indicator Status (PCM MIL Status)			2
Pre-Event Synchronization Timer			2
Propulsion Source Torque			1
Vehicle Mileage			4
Knee Bolster Air Bag Deployment, Time to Fire, Driver	OEM	CRASH	9
Knee Bolster Air Bag Deployment, Time to Fire, Front Passenger			8
Pretensioner, Time to Deploy, All Seating Positions Msec			5
Battery/High Voltage		VEHICLE	3

Data Element	Source¹	Type²	Number of OEMS Reporting Data Element
Brake Pedal Override			2
Cruise Control Pedal Override			2
Diagnostic Trouble Codes (ignition cycles since DTCs were cleared)			5
E-Pedal on/off Status			2
Tire Pressure at Each Wheel (right front, left front, right rear, left rear)			2
Turn Signal Lamps Status			4
Voltage Before Event/at Time Zero			3

¹ Source indicates which entities (UNECE, SAE, OEMs) have identified that the described data element would enhance EDR data reporting/analysis.

² In the Type field:

ADMIN = Administrative

ADAS = Vehicle Data Element Sub-Categorized as ADAS Feature

CRASH = Crashworthiness

VEHICLE = Pre-Crash Vehicle

Data elements listed in this table do not represent ALL data elements noted during the study. Rather, we subjectively chose this is a subset of elements where analysis indicated there may be a benefit. These data elements were thus determined to be “priority” for inclusion in the report because of potential utility to EDR end users.

Appendix B: CISS Case Numbers Used in the Study

OEM	Model Year	Model	CISS Case Number
BMW	2023	X3	1-13-2022-126-04
Daimler	2022	C-Class	1-15-2023-089-03
Ford	2022/2023/2023	Edge, Escape, Bronco Sport	1-28-2022-081-04, 1-52-2023-108-03, 1-11-2023-095-03
GM	2023	Escalade	1-59-2023-126-03
Honda	2024	Civic	1-21-2023-139-02
Hyundai	2022	Ioniq 5	1-27-2023-075-03
Mazda	2024	CX-90	1-24-2023-114-03
Mitsubishi	2023	Outlander	1-28-2023-062-04
Nissan	2023	Rogue	1-59-2023-043-03
Stellantis	2023	Grand Cherokee, Pacifica, 1500, Gladiator	1-12-2023-098-02, 1-11-2023-053-03, 1-73-2023-185-03, 1-20-2022-129-03
Subaru	2024	Crosstrek	1-28-2023-104-03
Tesla	2023	Model Y	1-27-2023-115-04
Toyota	2023/2024	GR86, Rav4	1-25-2022-096-03, 1-52-2023-122-04
Volkswagen	2022/2023	ID.4, Q5	1-25-2022-118-03, 1-27-2023-074-03
Volvo	2023	XC60	1-77-2022-085-03

CISS case files can be accessed at the web page/portal at www.crashviewer.nhtsa.dot.gov/CISS/SearchIndex.

Appendix C: Exemplar EDRs Used in the Study

Here are exemplar EDR reports. To reduce the page count, blank pages and the hexadecimal data have been removed. The full reports are available in the CISS case viewer at the link provided in Appendix B.

OEM	Model Year	Model	Report Type
GM	2023	Escalade	ACM/ASCM
Hyundai	2022	Ioniq 5	ACM
Stellantis	2023	1500	ACM
Toyota	2024	Rav4	ACM
Volkswagen	2022	ID.4	ACM

ACSM = active safety control module

2023 (GM) Cadillac Escalade

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	1GYS4PKL0PR*****
User	
Case Number	
EDR Data Imaging Date	
Crash Date	
Filename	20231059126_V1_ACM.CDRX
Saved on	
Imaged with CDR version	Crash Data Retrieval Tool 23.2.1
Imaged with Software Licensed to (Company Name)	Company Name information was removed when this file was saved without VIN sequence number
Reported with CDR version	Crash Data Retrieval Tool 23.4
Reported with Software Licensed to (Company Name)	NHTSA
EDR Device Type	Airbag Control Module
Event(s) recovered	Deployment Record 1, Non-Deployment Record 2, Deployment Record 3

Comments

No comments entered.

Data Limitations

Recorded Crash Events:

There are two types of recorded crash events for Front, Side, and Rear (FSR) Events. The first is the Non-Deployment Event. A Non-Deployment Event records data but does not deploy the air bag(s). The minimum SDM Recorded Vehicle Velocity Change, that is needed to record a Non-Deployment Event, is five MPH [8 km/h]. A Non-Deployment Event may contain Pre-Crash and Crash data. The oldest Non-Deployment event can be overwritten by a Deployment Event, if all three records are full and the Non-Deployment Event is not locked. A Non-Deployment Event can be overwritten by a more recent Non-Deployment Event if all three records are full and the Non-Deployment is older than approximately 250 ignition cycles. Also, a Non-Deployment event can be recorded if the 12 volt or High Voltage Battery Cut-Off Deployment occurs without the Deployment of the restraints such as air bags, pretensioners, or roll bars.

The second type of SDM recorded crash event for FSR Events is the Deployment Event. It also may contain Pre-Crash and Crash data.

Deployment Events cannot be overwritten or cleared by the SDM.

Rollover Events contains Pre-Crash and Crash data. Rollover events follow the same rules as FSR Deployment events.

The SDM can store up to three FSR/Rollover Events.

There are two types of PedPro crash events. The first is the Non-Deployment PedPro Event. A Non-Deployment PedPro Event records data but does not deploy anything. A Non-Deployment PedPro Event may contain Pre-Crash and Crash data.

For MY20-22 vehicles, a Non-Deployment PedPro Event will only record data within certain speed range.

The second type of PedPro recorded crash event is the Deployment PedPro Event. It also may contain Pre-Crash and Crash data. Deployment Events cannot be overwritten or cleared by the SDM.

The SDM can store up to two PedPro Events.

Data:

For FSR Events, SDM Recorded Vehicle Velocity Change reflects the change in velocity that the sensing system experienced during the recorded portion of the event. SDM Recorded Vehicle Velocity Change is the change in velocity during the recording time and is not the speed the vehicle was traveling before the event and is also not the Barrier Equivalent Velocity. For Deployment and Non-Deployment Events, the SDM will record up to 300 milliseconds of data after time zero. The SDM will also record up to 300 milliseconds of Vehicle Acceleration data after time zero.

For Rollover Events, the SDM may record Lateral Acceleration, Vertical Acceleration, and Roll Rate data, if the SDM is rollover capable. This data reflects what the sensing system experienced during the recorded portion of the event. For Rollover Deployment Events, the SDM will record up to 700 milliseconds of data before the Deployment criteria is met and 290 milliseconds after the Deployment criteria is met.

-The Maximum SDM Recorded Vehicle Velocity Change may occur between the recorded 10 millisecond sample points of the SDM Recorded Vehicle Velocity Change.

-Event Recording Complete will indicate if data from the recorded event has been fully written to the SDM memory or if it has been interrupted and not fully written.

-SDM Recorded Vehicle Speed accuracy can be affected by various factors, including but not limited to the following:

- Significant changes in the tire's rolling radius
- Final drive axle ratio changes
- Wheel lockup and wheel slip

-Pre-Crash data samples are captured prior to Time Zero (-0.5 to -8.0 seconds) at 500 millisecond intervals with an additional sample captured at Time Zero (referred as 0.0 second sample). Pre-Crash samples are captured asynchronously with respect to the Time Zero sample. The -0.5 second Pre-Crash sample (most recent recorded data point) is sampled within 500 milliseconds prior to Time Zero. All other Pre-Crash samples are referenced from this data point. Additionally, the data point sampled at 0.0 second is captured within 100 milliseconds prior to Time Zero.

- For Deployment and Non-Deployment Events, the SDM can record up to 8 seconds of Pre-Crash IMU Yaw Rate data. For MY22, the data value of -0.0240 deg/sec will be reported as Data Not Available.
- Pre-Crash Electronic Data Validity Check Status indicates "Data Invalid" if:
 - The SDM receives a message with an "invalid" flag from the module sending the pre-crash data
- Pre-Crash Electronic Data Validity Check Status indicates "Data Not Available" if:
 - No data is received from the module sending the pre-crash data
- For diesel powered vehicles, the data displayed as Throttle Position (%) is actually the data for the Air Inlet Flap Position. This is not the same as the throttle position for a gasoline powered engine.
- Belt Switch Circuit Status indicates the status of the seat belt switch circuit.
- The ignition cycle counter will increment when the power mode cycles from OFF/Accessory to RUN. Applying and removing of battery power to the module will not increment the ignition cycle counter.
- Ignition Cycles Since DTCs Were Last Cleared can be recorded with a maximum value of 253 cycles and can only be reset by a scan tool.
- Once a firing loop has been commanded to be deployed, it will not be commanded to be deployed again during the same ignition cycle. Firing loop times for subsequent deployment type events, during the same ignition cycle, will record the deployment times as N/A.
- The airbag control module may continue to function after the vehicle has been turned off or to accessory, for a set period of time, this is called Prolongation. However, all other vehicle modules may have their functions shut down during Prolongation. For example, if the SIR warning lamp is commanded on by the airbag control module, prior to entering Prolongation, it will be recorded in the EDR as being commanded off, since the vehicle display cluster would have been in the off state. In such cases, the "Number of Ignition Cycles SIR Warning Indicator was ON/OFF Continuously" and "SIR Warning Indicator ON/OFF Time" may represent warning indicator conditions prior to prolongation. Vehicle pre-event and system data may be recorded in the EDR as their commanded state, default state, or data invalid state.
- Propulsion System Active is an indicator of the vehicle's propulsion capability, either through electric motor, IC engine or both. The Propulsion System Active sets to True when the vehicle is ready to provide propulsion.
- IMU Longitudinal or Lateral Acceleration data value displayed as "Data Not Available" may represent either "Data Not Available" or -0.01g. IMU Longitudinal or Lateral Acceleration data value displayed as "Data Invalid" may represent either "Data Invalid" or -0.02g.
- Brake Pedal Position (%) represents brake pedal input from the driver. Brake pedal travel is reduced while the brake Boost system is active and can typically range between 0 to 60 percent. When Brake Boost system is not active, possible brake pedal travel will increase due to a lack of system generated pressure and can typically range between 0 to 100 percent.
- The GM parameter name is displayed in parentheses after the NHTSA Part 563 parameter name.
- All data should be examined in conjunction with other available physical evidence from the vehicle and scene.

Data Element Sign Convention:

The following table provides an explanation of the sign notation for data elements that may be included in this CDR report. Directional references to sign notation are all 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
Longitudinal Acceleration	Forward
Longitudinal Velocity Change	Forward
Lateral Acceleration	Left to Right
Lateral Velocity Change	Left to Right
Vertical Acceleration	Downward
Roll Rate	Clockwise Rotation
Steering Wheel Angle	Counterclockwise Rotation
Yaw Rate	Counterclockwise Rotation

Vehicle Type, Variant, and Version:

Use GM website <https://euval.ext.gm.com/> for the precise vehicle type, variant, and version (including the fitted active safety and accident avoidance systems) information of the vehicle hosting the event data recorder. Only for GM vehicles registered in the European Union.

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 tool.

01065_SDM50-veoneer_r019

System Status at Time of Retrieval

Ignition Cycle, Download (cycles)	863
Manufacturing Traceability - Line Identification	1
Manufacturing Traceability - Shift Identification	1
Manufacturing Traceability - Last Two Digits of Year	23
Manufacturing Traceability - Julian Date Day of the Year	046
Manufacturing Traceability - Serial, Lot or Batch Number	B02047324
Part of Assembly Traceability For ESS1 - Line Identification	1
Part of Assembly Traceability For ESS1 - Shift Identification	1
Part of Assembly Traceability For ESS1 - Last Two Digits of Year	23
Part of Assembly Traceability For ESS1 - Julian Date Day of the Year	050
Part of Assembly Traceability For ESS1 - Traceability Number	039C8EF21
Part of Assembly Traceability For ESS1 - Data Universal Number System	201189391
Part of Assembly Traceability For ESS1 - CVP and Product Structure	8110200000000U
Part of Assembly Traceability For ESS2 - Line Identification	2
Part of Assembly Traceability For ESS2 - Shift Identification	1
Part of Assembly Traceability For ESS2 - Last Two Digits of Year	23
Part of Assembly Traceability For ESS2 - Julian Date Day of the Year	036
Part of Assembly Traceability For ESS2 - Traceability Number	03024DA21
Part of Assembly Traceability For ESS2 - Data Universal Number System	201189391
Part of Assembly Traceability For ESS2 - CVP and Product Structure	8110200000000W
Part of Assembly Traceability For ESS3 - Line Identification	3
Part of Assembly Traceability For ESS3 - Shift Identification	1
Part of Assembly Traceability For ESS3 - Last Two Digits of Year	23
Part of Assembly Traceability For ESS3 - Julian Date Day of the Year	043
Part of Assembly Traceability For ESS3 - Traceability Number	0D3E7D1D2
Part of Assembly Traceability For ESS3 - Data Universal Number System	201189391
Part of Assembly Traceability For ESS3 - CVP and Product Structure	8110300000000B
Part of Assembly Traceability For ESS4 - Line Identification	4
Part of Assembly Traceability For ESS4 - Shift Identification	1
Part of Assembly Traceability For ESS4 - Last Two Digits of Year	23
Part of Assembly Traceability For ESS4 - Julian Date Day of the Year	043
Part of Assembly Traceability For ESS4 - Traceability Number	0146DC7E2
Part of Assembly Traceability For ESS4 - Data Universal Number System	201189391
Part of Assembly Traceability For ESS4 - CVP and Product Structure	8110300000000D
Part of Assembly Traceability For ESS5 - Line Identification	5
Part of Assembly Traceability For ESS5 - Shift Identification	1
Part of Assembly Traceability For ESS5 - Last Two Digits of Year	23
Part of Assembly Traceability For ESS5 - Julian Date Day of the Year	043
Part of Assembly Traceability For ESS5 - Traceability Number	05BC9C221
Part of Assembly Traceability For ESS5 - Data Universal Number System	201189391
Part of Assembly Traceability For ESS5 - CVP and Product Structure	8110300000000A
Part of Assembly Traceability For ESS6 - Line Identification	6
Part of Assembly Traceability For ESS6 - Shift Identification	1
Part of Assembly Traceability For ESS6 - Last Two Digits of Year	23
Part of Assembly Traceability For ESS6 - Julian Date Day of the Year	050
Part of Assembly Traceability For ESS6 - Traceability Number	0DBEBD421
Part of Assembly Traceability For ESS6 - Data Universal Number System	201189391
Part of Assembly Traceability For ESS6 - CVP and Product Structure	8110300000000C
Part of Assembly Part Number For ESS1	13525285
Part of Assembly Part Number For ESS2	13525285
Part of Assembly Part Number For ESS3	1352537
Part of Assembly Part Number For ESS4	1352537
Part of Assembly Part Number For ESS5	13525283
Part of Assembly Part Number For ESS6	13525283
BSWIDI Module Identifier	Primary Microprocessor Bootloader
BSWIDI Part Number	13548934
BSWIDI Alpha Code	AA
Module Identifier	Primary Microprocessor Application Software
ASWIDI Part Number	13551469
ASWIDI Alpha Code	AA
ADIDI Module Identifier 1	Main Calibration
ADIDI Part Number 1	85626625
ADIDI Alpha Code 1	AA
ADIDI Module Identifier 2	SBR Calibration

ADIDI Part Number 2	84993591
ADIDI Alpha Code 2	AB
Vehicle Identification Number (VIN)	1GYS4PKL0PR*****
GM End Model Part Number	13552062
GM Base Model Part Number	13552063
GM End Model Part Number Alpha Code	AA
GM Base Model Part Number Alpha Code	AA
Longitudinal Accelerometer Range (g)	120.0
Lateral Accelerometer Range (g)	120.0

Supplemental Event Record #1

Multi-Event, Number of Events (Event Counter)	1
Event Enable Time (msec)	842,243,088
Event End Time (msec)	842,243,271
Ignition Cycle, Crash (Ignition Cycles Counter)	858
Front Pretensioner Severity	False
Front Stage1 Severity	False
Front Stage2 Severity	False
Left Side Severity	True
Right Side Severity	True
Rollover Severity	False
Rear Severity	False
Battery Disconnect Side Severity	False
Event Record Status Event Type	Deployment Event

Supplemental Event Record #2

Multi-Event, Number of Events (Event Counter)	2
Event Enable Time (msec)	842,243,622
Event End Time (msec)	842,243,733
Ignition Cycle, Crash (Ignition Cycles Counter)	858
Front Pretensioner Severity	False
Front Stage1 Severity	False
Front Stage2 Severity	False
Left Side Severity	False
Right Side Severity	False
Rollover Severity	False
Rear Severity	False
Battery Disconnect Side Severity	False
Event Record Status Event Type	Non-Deployment Event
Time From Event 1 to 2 (msec)	534

Supplemental Event Record #3

Multi-Event, Number of Events (Event Counter)	4
Event Enable Time (msec)	842,244,196
Event End Time (msec)	842,244,331
Ignition Cycle, Crash (Ignition Cycles Counter)	858
Front Pretensioner Severity	False
Front Stage1 Severity	False
Front Stage2 Severity	False
Left Side Severity	False
Right Side Severity	False
Rollover Severity	True
Rear Severity	False
Battery Disconnect Side Severity	False
Event Record Status Event Type	Non-Deployment Event
Time From Event 2 to 3 (msec)	574

Supplemental Event Record #4

Multi-Event, Number of Events (Event Counter)	3
Event Enable Time (msec)	842,243,096
Event End Time (msec)	842,248,031
Ignition Cycle, Crash (Ignition Cycles Counter)	858
Front Pretensioner Severity	False
Front Stage1 Severity	False
Front Stage2 Severity	False
Left Side Severity	True
Right Side Severity	True
Rollover Severity	True
Rear Severity	False
Battery Disconnect Side Severity	False
Event Record Status Event Type	Deployment Event
Time From Event 3 to 4 (msec)	-1100

System Status at Event (Record 1)

Event Counter	1
Ignition Cycle Counter	858
Frontal Air Bag Warning Indicator (SIR Warning Indicator Status at Enable)	Off
SIR Warning Indicator ON/OFF Time (sec)	Reserved
Number of Ignition Cycles SIR Warning Indicator was ON/OFF Continuously	858
Ignition Cycles Since DTCs Were Last Cleared	252
Safety Belt Status, Driver (Driver Belt Switch Circuit Status)	Buckled
Safety Belt Status, Right Front Passenger (Front Passenger Belt Switch Circuit Status)	Buckled
Left Row 2 Belt Switch Circuit Status	Not Buckled
Right Row 2 Belt Switch Circuit Status	Not Buckled
Left Row 3 Belt Switch Circuit Status	Not Buckled
Right Row 3 Belt Switch Circuit Status	Not Buckled
Center Row 3 Belt Switch Circuit Status	Not Buckled
Maximum Resultant Delta-V - Longitudinal Component for FSR Event (MPH [km/h])	-7 [-12]
Maximum Resultant Delta-V - Lateral Component for FSR Event (MPH [km/h])	22 [35]
Maximum Delta-V, Longitudinal (Maximum Longitudinal SDM Recorded Vehicle Velocity Change for FSR Event) (MPH [km/h])	-8 [-13]
Time From FSR Time Zero to Time of the Maximum Resultant SDM Recorded Vehicle Velocity Change (msec)	144
Paired SDM Recorded Vehicle Lateral Velocity Change for Maximum Longitudinal Velocity Change (MPH [km/h])	21 [34]
Maximum Delta-V, Lateral (Maximum Lateral SDM Recorded Vehicle Velocity Change for FSR Event) (MPH [km/h])	22 [35]
Time, Maximum Delta-V (Time From FSR Time Zero to Maximum Longitudinal SDM Recorded Vehicle Velocity Change) (msec)	170
Paired SDM Recorded Vehicle Longitudinal Velocity Change for Maximum Lateral Velocity Change (MPH [km/h])	-7 [-12]
Time Maximum Delta-V, Lateral (Time From FSR Time Zero to Maximum Lateral SDM Recorded Vehicle Velocity Change) (msec)	138
Tire Pressure Low Indication On at Event	False
Ignition Operating Timer (msec)	842,243,088
UTC Time at Event	19:43:20
UTC Date at Event	2023/10/14
Frontal Algorithm Wakeup Time (msec)	4
Side Algorithm Wakeup Time (msec)	0
Rear Algorithm Wakeup Time (msec)	1
Rollover Algorithm Wakeup Time (msec)	29
Frontal Algorithm Reset Time (msec)	160
Side Algorithm Reset Time (msec)	112
Rear Algorithm Reset Time (msec)	65
Rollover Algorithm Reset Time (msec)	Data Not Available
Occupant Position Classification, Right Front Passenger (Front Passenger Seat Restraint Control Occupancy Status)	Yes (Occupied Adult)
Commanded State of Suppression ON (PAB Off) Indicator	Off
Commanded State of Suppression OFF (PAB On) Indicator	On
Time to Frontal Impact Pretensioner PCN Request (msec)	Data Not Available
Time to Frontal Impact Stage 1 PCN Request (msec)	Data Not Available
Time to Frontal Impact Stage 2 PCN Request (msec)	Data Not Available
Time to Left Side Impact PCN Request (msec)	1
Time to Right Side Impact PCN Request (msec)	40
Time to Rear Impact PCN Request (msec)	Data Not Available
Time to Rollover Impact PCN Request (msec)	Data Not Available
High Voltage Disable Notification Sent	True
Deployment Commanded in Energy Reserve Mode	False

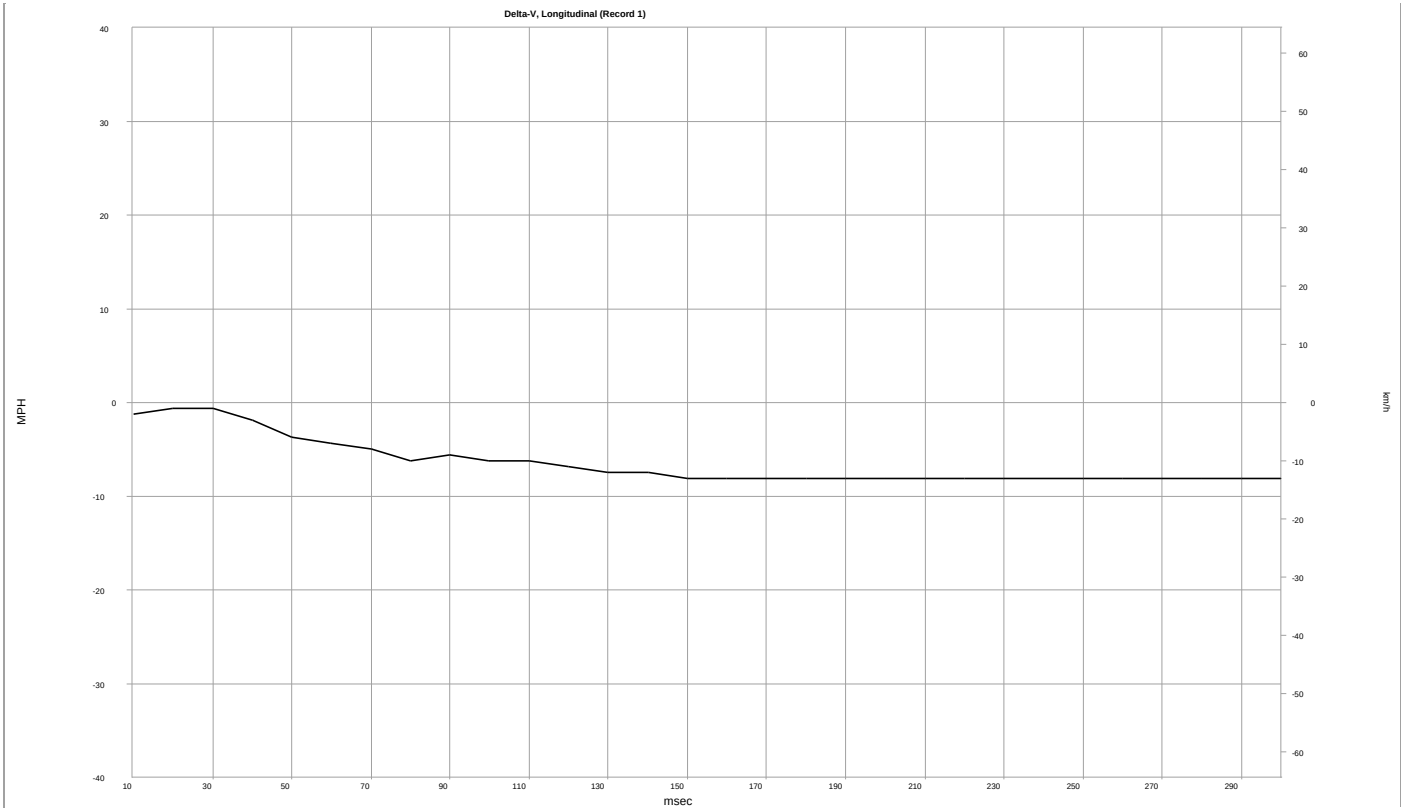
Time to Battery Disconnect Switch Side Severity (msec)	Data Not Available
Event Enable Time (T0) (msec)	842,243,088
Event End Time (Tend) (msec)	842,243,271
Complete File Recorded (Event Recording Progress and Complete Flag)	Event Recording Complete

Diagnostic Trouble Codes 0.5 Seconds Prior to Time Zero (Record 1)

DTC 1	N/A, N/A
DTC 2	N/A, N/A
DTC 3	N/A, N/A
DTC 4	N/A, N/A
DTC 5	N/A, N/A
DTC 6	N/A, N/A
DTC 7	N/A, N/A
DTC 8	N/A, N/A
DTC 9	N/A, N/A

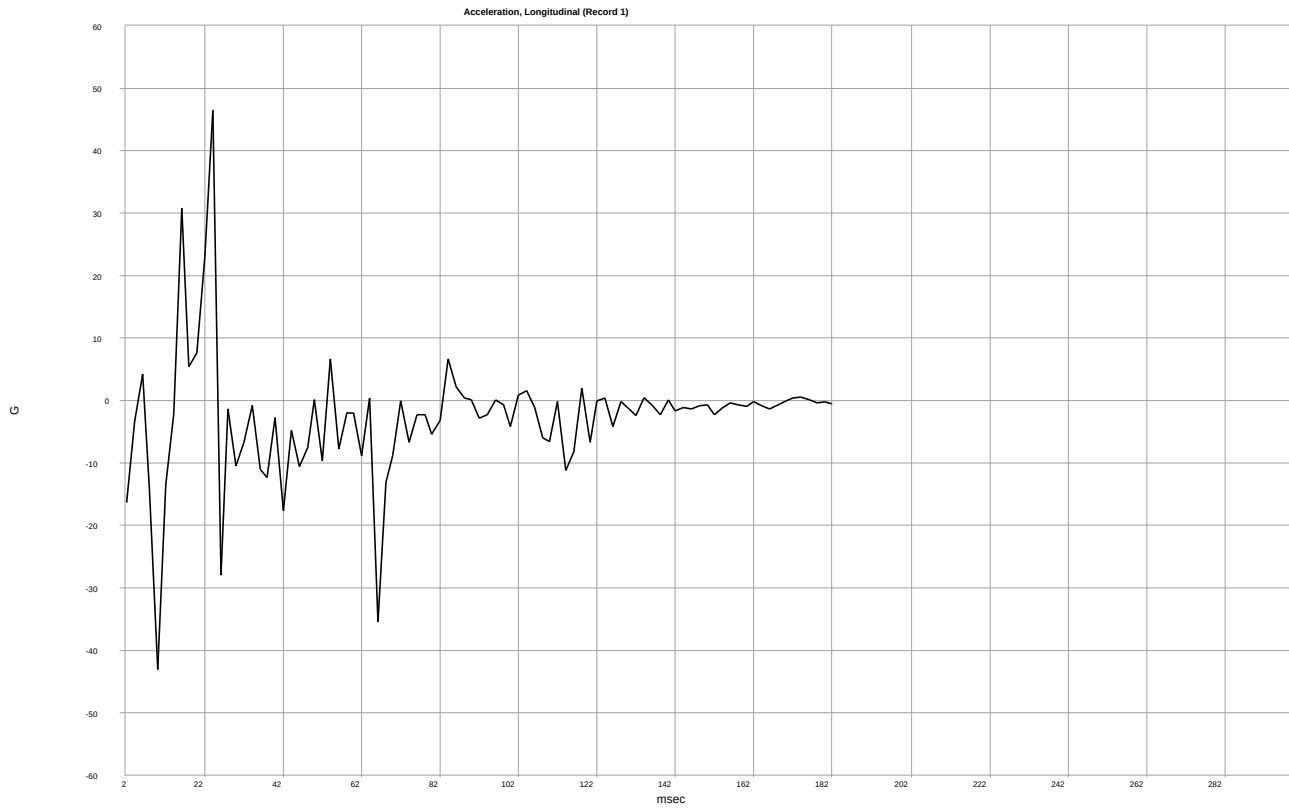
Deployment Command Data (Record 1)

Driver 1st Stage Deployment Loop Commanded (msec)	Data Not Available
Passenger 1st Stage Deployment Loop Commanded (msec)	Data Not Available
Driver 2nd Stage Deployment Loop Commanded (msec)	Data Not Available
Passenger 2nd Stage Deployment Loop Commanded (msec)	Data Not Available
Driver Pretensioner Deployment Loop #1 Commanded (msec)	1
Passenger Pretensioner Deployment Loop #1 Commanded (msec)	1
Driver Pretensioner Deployment Loop #2 Commanded (msec)	7
Passenger Pretensioner Deployment Loop #2 Commanded (msec)	7
Driver Thorax Loop Commanded (msec)	1
Passenger Thorax Loop Commanded Passenger (msec)	40
Left Front Roof Rail/Head Curtain Loop Commanded (msec)	1
Right Front Roof Rail/Head Curtain Loop Commanded (msec)	1
Driver Center Inboard Loop Commanded (msec)	40



Longitudinal Delta-V (Record 1)

Time (msec)	Delta-V, Longitudinal (SDM Recorded Vehicle Longitudinal Velocity Change for FSR Event) (MPH [km/h])
10	-1 [-2]
20	-1 [-1]
30	-1 [-1]
40	-2 [-3]
50	-4 [-6]
60	-4 [-7]
70	-5 [-8]
80	-6 [-10]
90	-6 [-9]
100	-6 [-10]
110	-6 [-10]
120	-7 [-11]
130	-7 [-12]
140	-7 [-12]
150	-8 [-13]
160	-8 [-13]
170	-8 [-13]
180	-8 [-13]
190	-8 [-13]
200	-8 [-13]
210	-8 [-13]
220	-8 [-13]
230	-8 [-13]
240	-8 [-13]
250	-8 [-13]
260	-8 [-13]
270	-8 [-13]
280	-8 [-13]
290	-8 [-13]
300	-8 [-13]



Longitudinal Acceleration (Record 1)

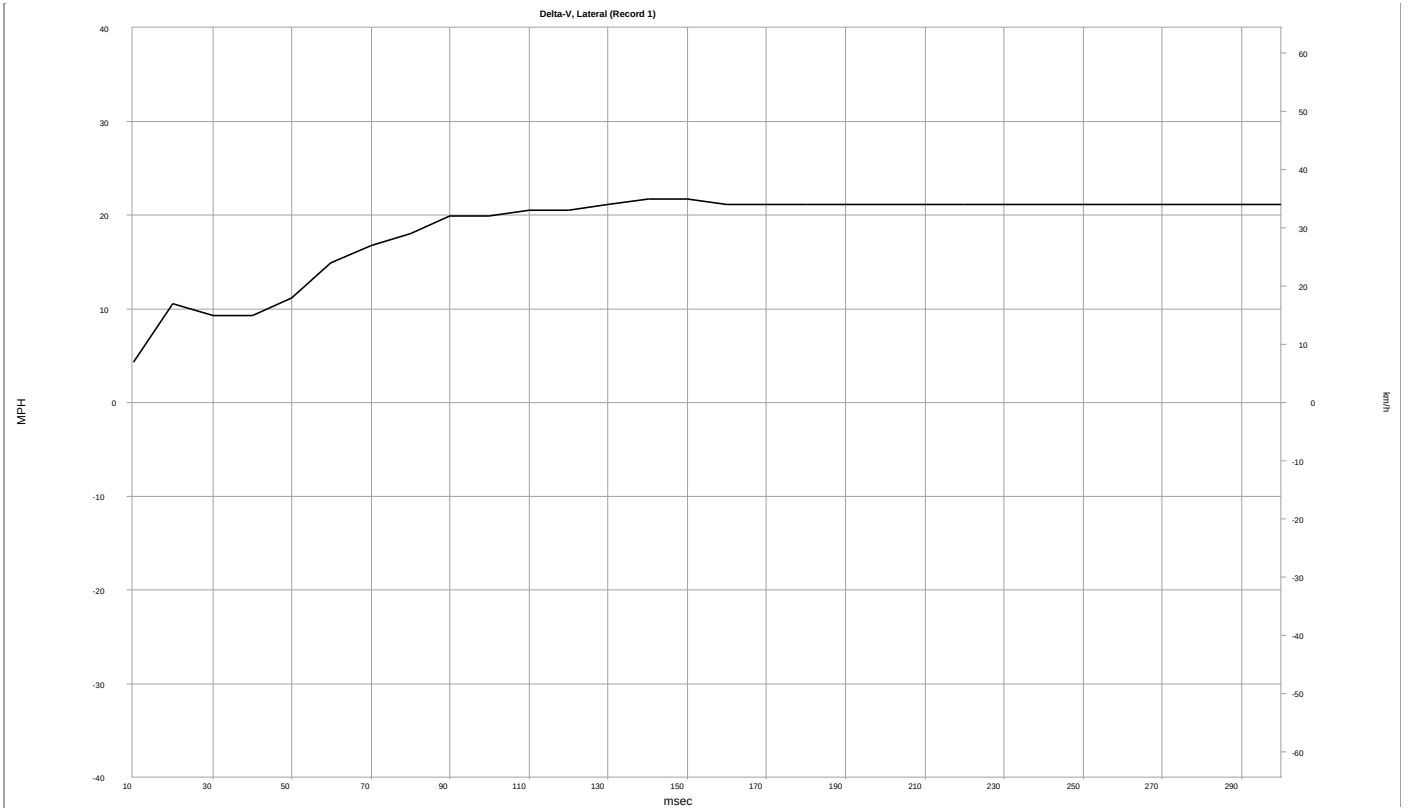
Time (msec)	Longitudinal Acceleration (SDM Recorded Vehicle Longitudinal Acceleration for FSR Event) (g)
2	-16.30
4	-3.31
6	4.24
8	-14.24
10	-43.11
12	-13.49
14	-2.12
16	30.80
18	5.37
20	7.56
22	22.99
24	46.48
26	-27.99
28	-1.37
30	-10.49
32	-6.68
34	-0.81
36	-11.05
38	-12.30
40	-2.74
42	-17.61
44	-4.74
46	-10.55
48	-7.49
50	0.18
52	-9.62
54	6.62
56	-7.74
58	-1.93
60	-2.06
62	-8.87
64	0.37
66	-35.42
68	-13.12
70	-8.74
72	-0.06
74	-6.68
76	-2.31
78	-2.24
80	-5.37
82	-3.18
84	6.68
86	2.18
88	0.37
90	0.18
92	-2.81
94	-2.24
96	0.06
98	-0.74
100	-4.12
102	0.87
104	1.56
106	-1.06
108	-5.99
110	-6.56
112	-0.12
114	-11.18
116	-8.24

Time (msec)	Longitudinal Acceleration (SDM Recorded Vehicle Longitudinal Acceleration for FSR Event) (g)
118	1.93
120	-6.62
122	-0.06
124	0.37
126	-4.12
128	-0.18
130	-1.37
132	-2.37
134	0.49
136	-0.81
138	-2.24
140	0.06
142	-1.62
144	-1.06
146	-1.31
148	-0.87
150	-0.68
152	-2.31
154	-1.18
156	-0.43
158	-0.68
160	-0.93
162	-0.18
164	-0.87
166	-1.31
168	-0.68
170	-0.06
172	0.43
174	0.56
176	0.18
178	-0.37
180	-0.24
182	-0.56
184	Data Not Available
186	Data Not Available
188	Data Not Available
190	Data Not Available
192	Data Not Available
194	Data Not Available
196	Data Not Available
198	Data Not Available
200	Data Not Available
202	Data Not Available
204	Data Not Available
206	Data Not Available
208	Data Not Available
210	Data Not Available
212	Data Not Available
214	Data Not Available
216	Data Not Available
218	Data Not Available
220	Data Not Available
222	Data Not Available
224	Data Not Available
226	Data Not Available
228	Data Not Available
230	Data Not Available
232	Data Not Available
234	Data Not Available
236	Data Not Available

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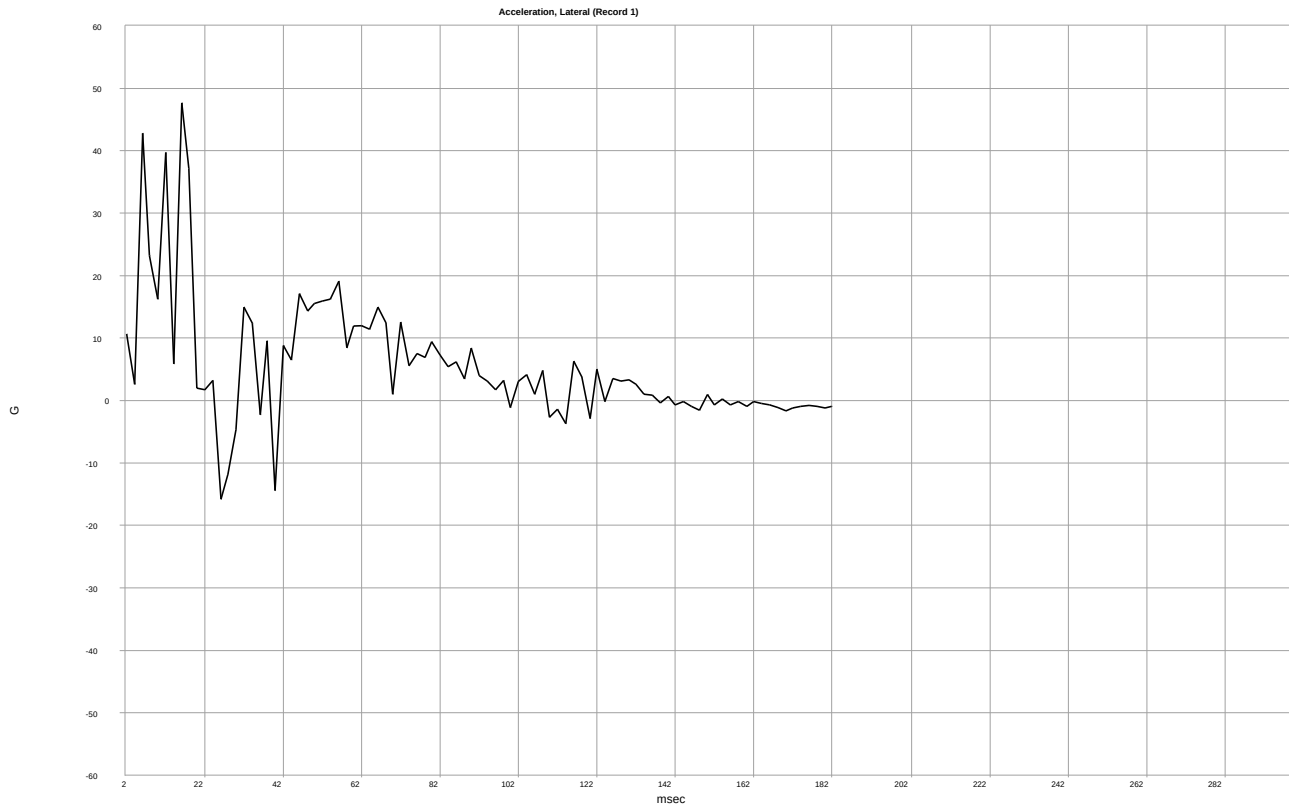
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Time (msec)	Longitudinal Acceleration (SDM Recorded Vehicle Longitudinal Acceleration for FSR Event) (g)
238	Data Not Available
240	Data Not Available
242	Data Not Available
244	Data Not Available
246	Data Not Available
248	Data Not Available
250	Data Not Available
252	Data Not Available
254	Data Not Available
256	Data Not Available
258	Data Not Available
260	Data Not Available
262	Data Not Available
264	Data Not Available
266	Data Not Available
268	Data Not Available
270	Data Not Available
272	Data Not Available
274	Data Not Available
276	Data Not Available
278	Data Not Available
280	Data Not Available
282	Data Not Available
284	Data Not Available
286	Data Not Available
288	Data Not Available
290	Data Not Available
292	Data Not Available
294	Data Not Available
296	Data Not Available
298	Data Not Available
300	Data Not Available



Lateral Delta-V (Record 1)

Time (msec)	Delta-V, Lateral (SDM Recorded Vehicle Lateral Velocity Change for FSR Event) (MPH [km/h])
10	4 [7]
20	11 [17]
30	9 [15]
40	9 [15]
50	11 [18]
60	15 [24]
70	17 [27]
80	18 [29]
90	20 [32]
100	20 [32]
110	21 [33]
120	21 [33]
130	21 [34]
140	22 [35]
150	22 [35]
160	21 [34]
170	21 [34]
180	21 [34]
190	21 [34]
200	21 [34]
210	21 [34]
220	21 [34]
230	21 [34]
240	21 [34]
250	21 [34]
260	21 [34]
270	21 [34]
280	21 [34]
290	21 [34]
300	21 [34]



Lateral Acceleration (Record 1)

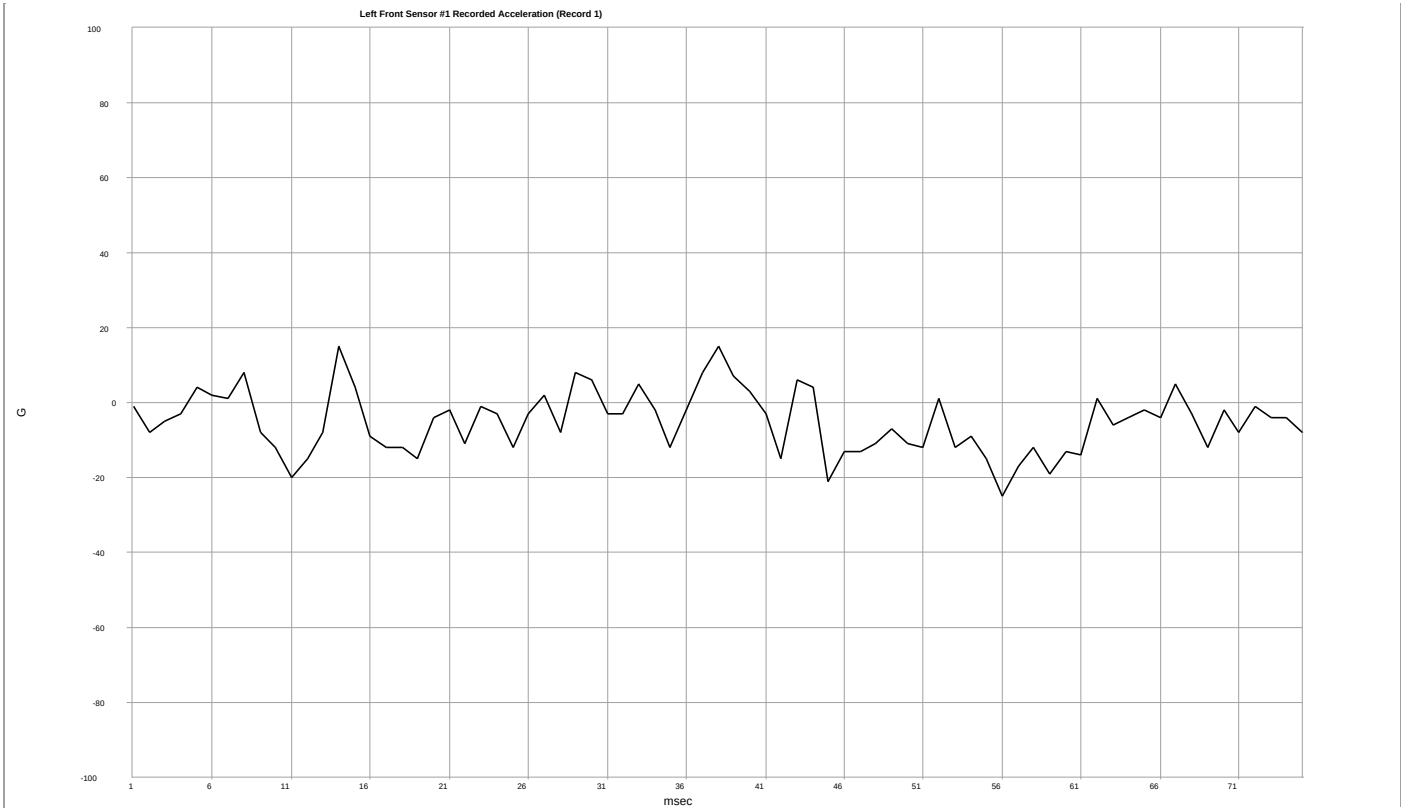
Time (msec)	Lateral Acceleration (SDM Recorded Vehicle Lateral Acceleration for FSR Event) (g)
2	10.68
4	2.62
6	42.73
8	23.18
10	16.24
12	39.73
14	5.87
16	47.60
18	37.11
20	1.93
22	1.74
24	3.18
26	-15.80
28	-11.80
30	-4.68
32	14.93
34	12.37
36	-2.31
38	9.55
40	-14.43
42	8.80
44	6.49
46	17.11
48	14.37
50	15.62
52	15.93
54	16.24
56	19.11
58	8.49
60	11.87
62	11.99
64	11.43
66	14.93
68	12.49
70	0.99
72	12.55
74	5.56
76	7.49
78	6.93
80	9.37
82	7.31
84	5.43
86	6.18
88	3.43
90	8.37
92	3.99
94	3.12
96	1.74
98	3.24
100	-1.12
102	3.06
104	4.12
106	0.99
108	4.74
110	-2.68
112	-1.43
114	-3.68
116	6.24
118	3.74

Time (msec)	Lateral Acceleration (SDM Recorded Vehicle Lateral Acceleration for FSR Event) (g)
120	-2.87
122	4.99
124	-0.18
126	3.49
128	3.12
130	3.31
132	2.62
134	0.99
136	0.87
138	-0.37
140	0.62
142	-0.68
144	-0.18
146	-0.93
148	-1.56
150	0.93
152	-0.68
154	0.24
156	-0.74
158	-0.18
160	-0.93
162	-0.12
164	-0.49
166	-0.74
168	-1.06
170	-1.68
172	-1.18
174	-0.93
176	-0.81
178	-0.93
180	-1.18
182	-0.93
184	Data Not Available
186	Data Not Available
188	Data Not Available
190	Data Not Available
192	Data Not Available
194	Data Not Available
196	Data Not Available
198	Data Not Available
200	Data Not Available
202	Data Not Available
204	Data Not Available
206	Data Not Available
208	Data Not Available
210	Data Not Available
212	Data Not Available
214	Data Not Available
216	Data Not Available
218	Data Not Available
220	Data Not Available
222	Data Not Available
224	Data Not Available
226	Data Not Available
228	Data Not Available
230	Data Not Available
232	Data Not Available
234	Data Not Available
236	Data Not Available
238	Data Not Available
240	Data Not Available

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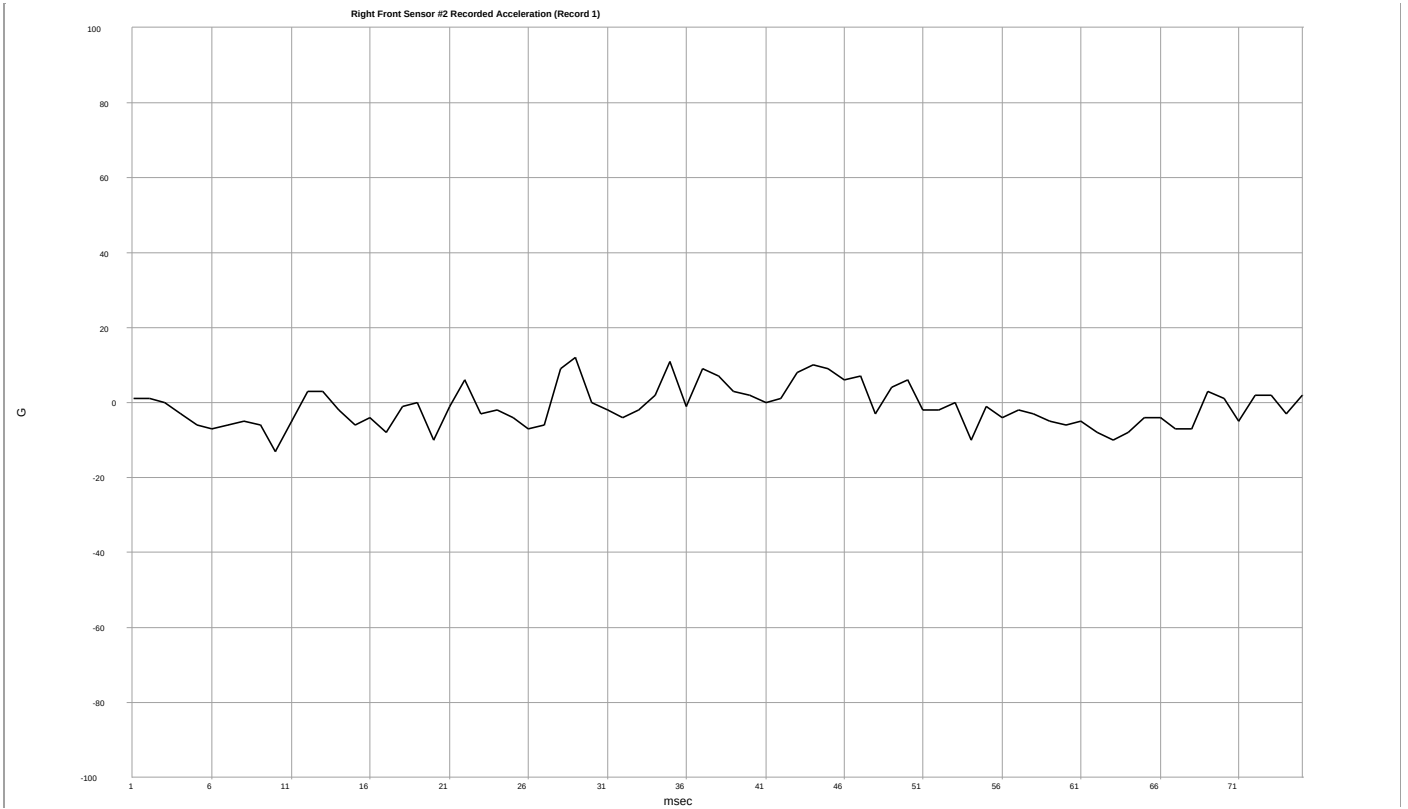
Time (msec)	Lateral Acceleration (SDM Recorded Vehicle Lateral Acceleration for FSR Event) (g)
242	Data Not Available
244	Data Not Available
246	Data Not Available
248	Data Not Available
250	Data Not Available
252	Data Not Available
254	Data Not Available
256	Data Not Available
258	Data Not Available
260	Data Not Available
262	Data Not Available
264	Data Not Available
266	Data Not Available
268	Data Not Available
270	Data Not Available
272	Data Not Available
274	Data Not Available
276	Data Not Available
278	Data Not Available
280	Data Not Available
282	Data Not Available
284	Data Not Available
286	Data Not Available
288	Data Not Available
290	Data Not Available
292	Data Not Available
294	Data Not Available
296	Data Not Available
298	Data Not Available
300	Data Not Available



Left Front Sensor #1 Recorded Acceleration (Record 1)

Time (msec)	Left Front Sensor #1 Recorded Acceleration (g)
1	-1.00
2	-8.00
3	-5.00
4	-3.00
5	4.00
6	2.00
7	1.00
8	8.00
9	-8.00
10	-12.00
11	-20.00
12	-15.00
13	-8.00
14	15.00
15	4.00
16	-9.00
17	-12.00
18	-12.00
19	-15.00
20	-4.00
21	-2.00
22	-11.00
23	-1.00
24	-3.00
25	-12.00
26	-3.00
27	2.00
28	-8.00
29	8.00
30	6.00
31	-3.00
32	-3.00
33	5.00
34	-2.00
35	-12.00
36	-2.00
37	8.00
38	15.00
39	7.00
40	3.00
41	-3.00
42	-15.00
43	6.00
44	4.00
45	-21.00
46	-13.00
47	-13.00
48	-11.00
49	-7.00
50	-11.00
51	-12.00
52	1.00
53	-12.00
54	-9.00
55	-15.00
56	-25.00
57	-17.00
58	-12.00
59	-19.00

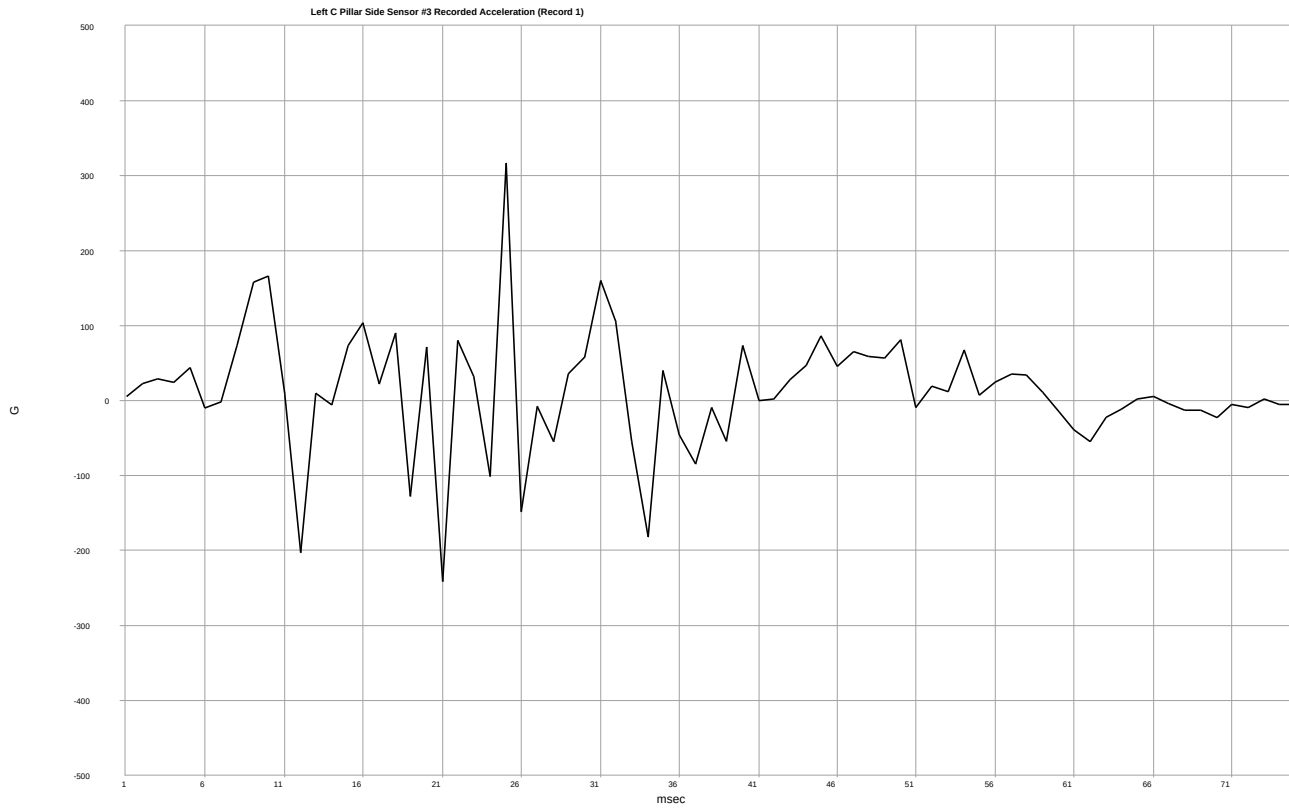
Time (msec)	Left Front Sensor #1 Recorded Acceleration (g)
60	-13.00
61	-14.00
62	1.00
63	-6.00
64	-4.00
65	-2.00
66	-4.00
67	5.00
68	-3.00
69	-12.00
70	-2.00
71	-8.00
72	-1.00
73	-4.00
74	-4.00
75	-8.00



Right Front Sensor #2 Recorded Acceleration (Record 1)

Time (msec)	Right Front Sensor #2 Recorded Acceleration (g)
1	1.00
2	1.00
3	0.00
4	-3.00
5	-6.00
6	-7.00
7	-6.00
8	-5.00
9	-6.00
10	-13.00
11	-5.00
12	3.00
13	3.00
14	-2.00
15	-6.00
16	-4.00
17	-8.00
18	-1.00
19	0.00
20	-10.00
21	-1.00
22	6.00
23	-3.00
24	-2.00
25	-4.00
26	-7.00
27	-6.00
28	9.00
29	12.00
30	0.00
31	-2.00
32	-4.00
33	-2.00
34	2.00
35	11.00
36	-1.00
37	9.00
38	7.00
39	3.00
40	2.00
41	0.00
42	1.00
43	8.00
44	10.00
45	9.00
46	6.00
47	7.00
48	-3.00
49	4.00
50	6.00
51	-2.00
52	-2.00
53	0.00
54	-10.00
55	-1.00
56	-4.00
57	-2.00
58	-3.00
59	-5.00

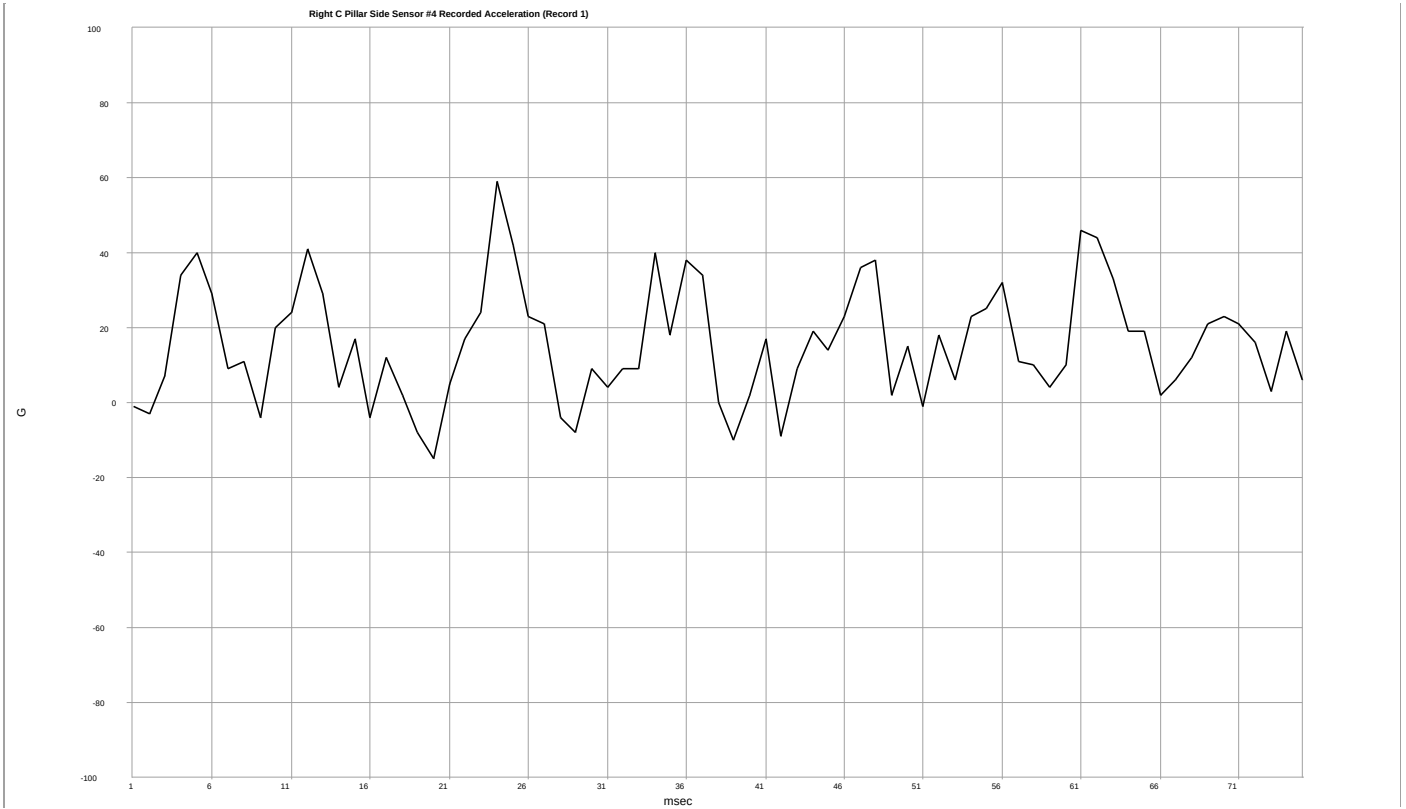
Time (msec)	Right Front Sensor #2 Recorded Acceleration (g)
60	-6.00
61	-5.00
62	-8.00
63	-10.00
64	-8.00
65	-4.00
66	-4.00
67	-7.00
68	-7.00
69	3.00
70	1.00
71	-5.00
72	2.00
73	2.00
74	-3.00
75	2.00



Left C Pillar Side Sensor #3 Recorded Acceleration (Record 1)

Time (msec)	Left C Pillar Side Sensor #3 Recorded Acceleration (g)
1	5.00
2	23.00
3	29.00
4	24.00
5	44.00
6	-10.00
7	-2.00
8	73.00
9	158.00
10	166.00
11	10.00
12	-203.00
13	10.00
14	-6.00
15	73.00
16	104.00
17	22.00
18	90.00
19	-128.00
20	71.00
21	-241.36
22	80.00
23	32.00
24	-101.00
25	316.36
26	-148.00
27	-8.00
28	-55.00
29	36.00
30	58.00
31	160.00
32	106.00
33	-54.00
34	-182.00
35	40.00
36	-46.00
37	-85.00
38	-9.00
39	-54.00
40	73.00
41	0.00
42	2.00
43	28.00
44	47.00
45	86.00
46	46.00
47	65.00
48	59.00
49	57.00
50	81.00
51	-9.00
52	19.00
53	12.00
54	67.00
55	7.00
56	25.00
57	35.00
58	34.00
59	11.00

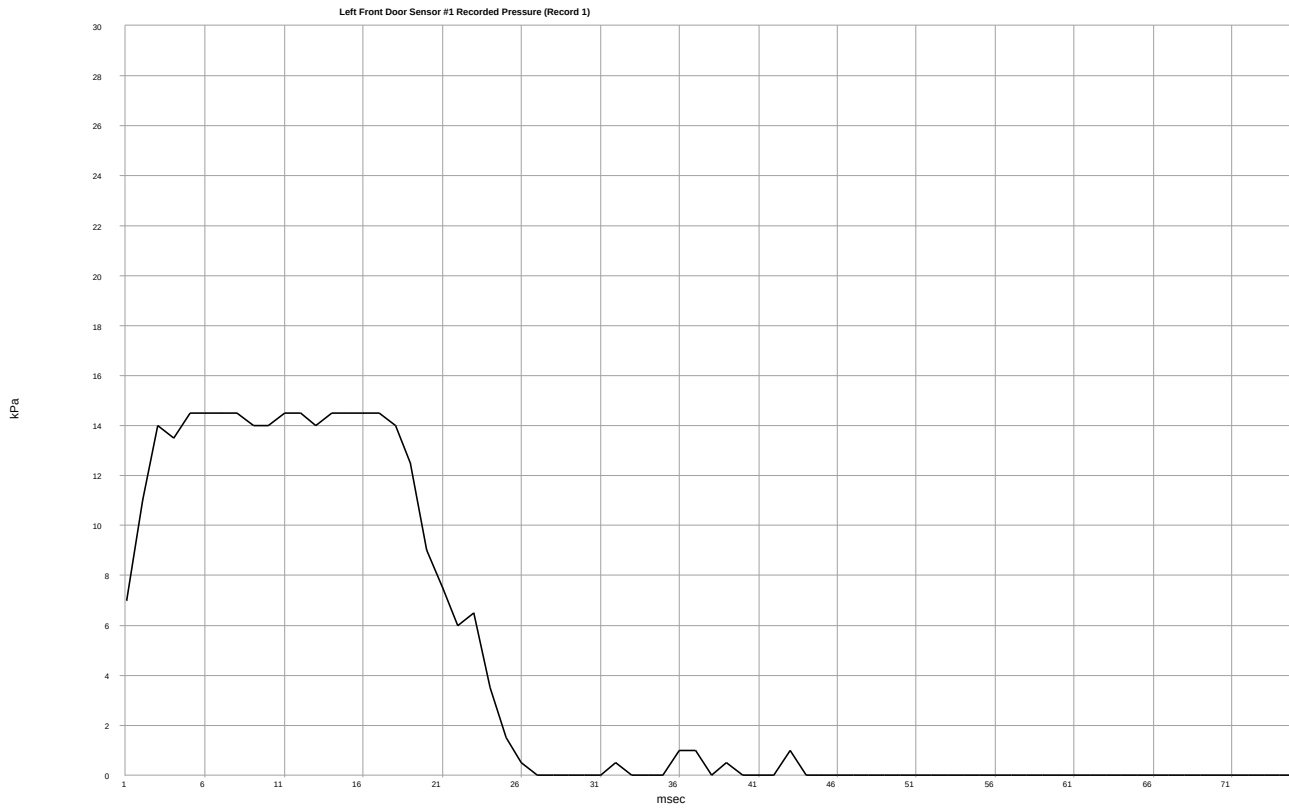
Time (msec)	Left C Pillar Side Sensor #3 Recorded Acceleration (g)
60	-15.00
61	-39.00
62	-55.00
63	-22.00
64	-12.00
65	2.00
66	5.00
67	-4.00
68	-13.00
69	-13.00
70	-23.00
71	-5.00
72	-9.00
73	2.00
74	-5.00
75	-5.00



Right C Pillar Side Sensor #4 Recorded Acceleration (Record 1)

Time (msec)	Right C Pillar Side Sensor #4 Recorded Acceleration (g)
1	-1.00
2	-3.00
3	7.00
4	34.00
5	40.00
6	29.00
7	9.00
8	11.00
9	-4.00
10	20.00
11	24.00
12	41.00
13	29.00
14	4.00
15	17.00
16	-4.00
17	12.00
18	2.00
19	-8.00
20	-15.00
21	5.00
22	17.00
23	24.00
24	59.00
25	42.00
26	23.00
27	21.00
28	-4.00
29	-8.00
30	9.00
31	4.00
32	9.00
33	9.00
34	40.00
35	18.00
36	38.00
37	34.00
38	0.00
39	-10.00
40	2.00
41	17.00
42	-9.00
43	9.00
44	19.00
45	14.00
46	23.00
47	36.00
48	38.00
49	2.00
50	15.00
51	-1.00
52	18.00
53	6.00
54	23.00
55	25.00
56	32.00
57	11.00
58	10.00
59	4.00

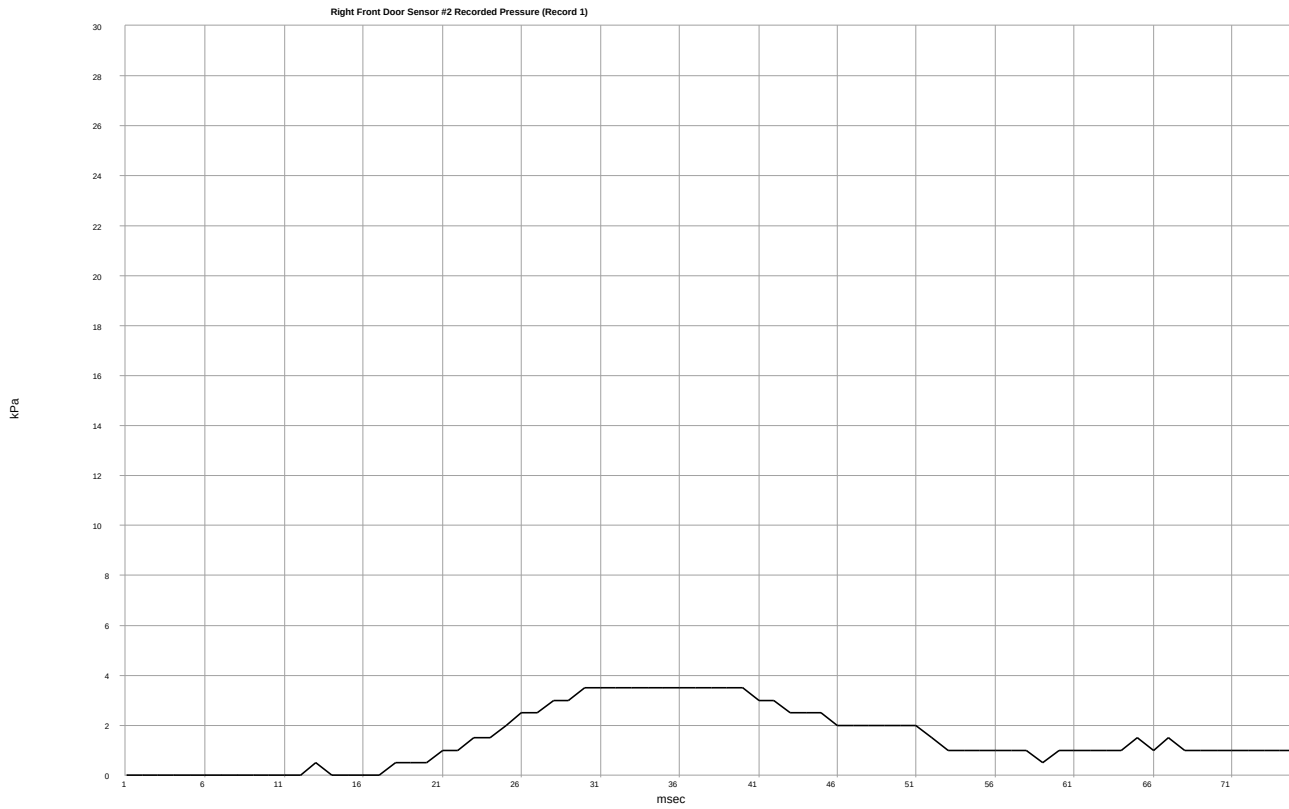
Time (msec)	Right C Pillar Side Sensor #4 Recorded Acceleration (g)
60	10.00
61	46.00
62	44.00
63	33.00
64	19.00
65	19.00
66	2.00
67	6.00
68	12.00
69	21.00
70	23.00
71	21.00
72	16.00
73	3.00
74	19.00
75	6.00



Left Front Door Sensor #1 Recorded Pressure (Record 1)

Time (msec)	Left Front Door Sensor #1 Recorded Pressure (kPa)
1	7.0
2	11.0
3	14.0
4	13.5
5	14.5
6	14.5
7	14.5
8	14.5
9	14.0
10	14.0
11	14.5
12	14.5
13	14.0
14	14.5
15	14.5
16	14.5
17	14.5
18	14.0
19	12.5
20	9.0
21	7.5
22	6.0
23	6.5
24	3.5
25	1.5
26	0.5
27	0.0
28	0.0
29	0.0
30	0.0
31	0.0
32	0.5
33	0.0
34	0.0
35	0.0
36	1.0
37	1.0
38	0.0
39	0.5
40	0.0
41	0.0
42	0.0
43	1.0
44	0.0
45	0.0
46	0.0
47	0.0
48	0.0
49	0.0
50	0.0
51	0.0
52	0.0
53	0.0
54	0.0
55	0.0
56	0.0
57	0.0
58	0.0
59	0.0

Time (msec)	Left Front Door Sensor #1 Recorded Pressure (kPa)
60	0.0
61	0.0
62	0.0
63	0.0
64	0.0
65	0.0
66	0.0
67	0.0
68	0.0
69	0.0
70	0.0
71	0.0
72	0.0
73	0.0
74	0.0
75	0.0



Right Front Door Sensor #2 Recorded Pressure (Record 1)

Time (msec)	Right Front Door Sensor #2 Recorded Pressure (kPa)
1	0.0
2	0.0
3	0.0
4	0.0
5	0.0
6	0.0
7	0.0
8	0.0
9	0.0
10	0.0
11	0.0
12	0.0
13	0.5
14	0.0
15	0.0
16	0.0
17	0.0
18	0.5
19	0.5
20	0.5
21	1.0
22	1.0
23	1.5
24	1.5
25	2.0
26	2.5
27	2.5
28	3.0
29	3.0
30	3.5
31	3.5
32	3.5
33	3.5
34	3.5
35	3.5
36	3.5
37	3.5
38	3.5
39	3.5
40	3.5
41	3.0
42	3.0
43	2.5
44	2.5
45	2.5
46	2.0
47	2.0
48	2.0
49	2.0
50	2.0
51	2.0
52	1.5
53	1.0
54	1.0
55	1.0
56	1.0
57	1.0
58	1.0
59	0.5

Time (msec)	Right Front Door Sensor #2 Recorded Pressure (kPa)
60	1.0
61	1.0
62	1.0
63	1.0
64	1.0
65	1.5
66	1.0
67	1.5
68	1.0
69	1.0
70	1.0
71	1.0
72	1.0
73	1.0
74	1.0
75	1.0

Pre-Crash Data -8.0 to 0.0 sec (Record 1) - Table 1 of 7

Time (sec)	Accelerator Pedal, % Full (%)	ABS Activity	Brake Pedal Position (%)	Driver Applied Brake Pedal Pressure (kPa)	Driver Applied Brake Pedal Pressure Detected	Service Brake, On/Off (Brake Pedal Initial Travel Achieved)	Cruise and Speed Limiter Switch Status
-8.0	0	Off	16	162	True	On (True)	No Activation
-7.5	0	Off	12	81	True	On (True)	No Activation
-7.0	0	Off	8	81	False	On (True)	No Activation
-6.5	0	Off	0	0	False	Off (False)	No Activation
-6.0	0	Off	14	567	True	On (True)	No Activation
-5.5	0	Off	29	891	True	On (True)	No Activation
-5.0	0	Off	29	810	True	On (True)	No Activation
-4.5	0	Off	22	486	True	On (True)	No Activation
-4.0	14	Off	0	0	False	Off (False)	No Activation
-3.5	14	Off	0	0	False	Off (False)	No Activation
-3.0	18	Off	0	0	False	Off (False)	No Activation
-2.5	18	Off	0	0	False	Off (False)	No Activation
-2.0	36	Off	0	0	False	Off (False)	No Activation
-1.5	99	Off	0	0	False	Off (False)	No Activation
-1.0	99	Off	0	0	False	Off (False)	No Activation
-0.5	99	Off	0	0	False	Off (False)	No Activation
0.0	99	Off	0	0	False	Off (False)	No Activation

Pre-Crash Data -8.0 to 0.0 sec (Record 1) - Table 2 of 7

Time (sec)	Cruise Secondary Switch Status	Conventional Cruise Control	Adaptive Cruise Control Selected Mode	Adaptive Cruise Control	Transmission Estimated Gear	Transmission Shift Lever Position	Reduced Engine Power Mode Indicator On
-8.0	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-7.5	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-7.0	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-6.5	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-6.0	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-5.5	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-5.0	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-4.5	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-4.0	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-3.5	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-3.0	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-2.5	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-2.0	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-1.5	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-1.0	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-0.5	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
0.0	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off

Pre-Crash Data -8.0 to 0.0 sec (Record 1) - Table 3 of 7

Time (sec)	Engine RPM (Engine Speed)	Engine Torque (Nm [Ft Lbs])	Engine Throttle, % Full (%)	Speed, Vehicle Indicated (MPH [km/h])	IMU Yaw Rate (deg/sec)	Right Front Wheel Angular Speed (RPM)	Left Front Wheel Angular Speed (RPM)
-8.0	571	46.0 [33.9]	5	1 [2]	0.288	12	12
-7.5	588	43.0 [31.7]	6	0 [0]	-0.216	0	0
-7.0	561	42.5 [31.3]	6	0 [0]	-0.120	0	0
-6.5	561	42.5 [31.3]	5	0 [0]	-0.144	0	0
-6.0	566	40.0 [29.5]	5	0 [0]	-0.144	0	0
-5.5	567	38.5 [28.4]	5	0 [0]	-0.192	0	0
-5.0	574	38.0 [28.0]	5	0 [0]	-0.120	0	0
-4.5	568	36.5 [26.9]	5	0 [0]	-0.144	0	0
-4.0	593	79.0 [58.3]	5	0 [0]	-0.120	0	0
-3.5	1,210	167.0 [123.2]	18	0 [0]	-0.144	0	0
-3.0	1,411	162.0 [119.5]	22	1 [2]	0.384	18	17
-2.5	1,621	197.0 [145.3]	27	3 [5]	4.104	39	37
-2.0	1,642	193.5 [142.7]	27	5 [8]	11.760	64	55
-1.5	2,638	535.5 [395.0]	74	9 [14]	5.520	98	94
-1.0	2,940	559.0 [412.3]	99	14 [22]	-1.680	160	160
-0.5	3,603	562.5 [414.9]	99	19 [31]	-15.384	217	219
0.0	3,963	571.0 [421.1]	99	21 [33]	-16.056	227	228

Pre-Crash Data -8.0 to 0.0 sec (Record 1) - Table 4 of 7

Time (sec)	Right Rear Wheel Angular Speed (RPM)	Left Rear Wheel Angular Speed (RPM)	Steering Wheel Angle (deg)	Propulsion System Active	System Power Mode	Backup System Power Mode	SDM Power Mode
-8.0	12	13	25	True	Propulsion	Propulsion	Propulsion
-7.5	0	0	25	True	Propulsion	Propulsion	Propulsion
-7.0	0	0	27	True	Propulsion	Propulsion	Propulsion
-6.5	0	0	28	True	Propulsion	Propulsion	Propulsion
-6.0	0	0	28	True	Propulsion	Propulsion	Propulsion
-5.5	0	0	28	True	Propulsion	Propulsion	Propulsion
-5.0	0	0	27	True	Propulsion	Propulsion	Propulsion
-4.5	0	0	27	True	Propulsion	Propulsion	Propulsion
-4.0	0	0	27	True	Propulsion	Propulsion	Propulsion
-3.5	0	0	27	True	Propulsion	Propulsion	Propulsion
-3.0	18	18	60	True	Propulsion	Propulsion	Propulsion
-2.5	38	37	174	True	Propulsion	Propulsion	Propulsion
-2.0	62	59	258	True	Propulsion	Propulsion	Propulsion
-1.5	97	93	92	True	Propulsion	Propulsion	Propulsion
-1.0	159	159	-25	True	Propulsion	Propulsion	Propulsion
-0.5	212	217	-134	True	Propulsion	Propulsion	Propulsion
0.0	233	231	-138	True	Propulsion	Propulsion	Propulsion

Pre-Crash Data -8.0 to 0.0 sec (Record 1) - Table 5 of 7

Time (sec)	Ignition Status	Ignition Prolongation Timer (sec)	Secondary Collision Prolongation Timer (sec)	Antilock Brake System Failed	Brake Pedal Override Flag	Automatic Brake Status	Electronic Stability Control Status
-8.0	On	5.0	0.0	False	False	Not Active	Normal Operation
-7.5	On	5.0	0.0	False	False	Not Active	Normal Operation
-7.0	On	5.0	0.0	False	False	Not Active	Normal Operation
-6.5	On	5.0	0.0	False	False	Not Active	Normal Operation
-6.0	On	5.0	0.0	False	False	Not Active	Normal Operation
-5.5	On	5.0	0.0	False	False	Not Active	Normal Operation
-5.0	On	5.0	0.0	False	False	Not Active	Normal Operation
-4.5	On	5.0	0.0	False	False	Not Active	Normal Operation
-4.0	On	5.0	0.0	False	False	Not Active	Normal Operation
-3.5	On	5.0	0.0	False	False	Not Active	Normal Operation
-3.0	On	5.0	0.0	False	False	Not Active	Normal Operation
-2.5	On	5.0	0.0	False	False	Not Active	Normal Operation
-2.0	On	5.0	0.0	False	False	Not Active	Normal Operation
-1.5	On	5.0	0.0	False	False	Not Active	Normal Operation
-1.0	On	5.0	0.0	False	False	Not Active	Normal Operation
-0.5	On	5.0	0.0	False	False	Not Active	Normal Operation
0.0	On	5.0	0.0	False	False	Not Active	Normal Operation

Pre-Crash Data -8.0 to 0.0 sec (Record 1) - Table 6 of 7

Time (sec)	Traction Control System Present	Traction Control System Failed	Traction Control System Enabled	Traction Control System Active	Traction Control System Switch Status	Left Turn Signal Switch Active	Right Turn Signal Switch Active
-8.0	True	False	True	Traction Control Off	Enabled	False	False
-7.5	True	False	True	Traction Control Off	Enabled	False	False
-7.0	True	False	True	Traction Control Off	Enabled	False	False
-6.5	True	False	True	Traction Control Off	Enabled	False	False
-6.0	True	False	True	Traction Control Off	Enabled	False	False
-5.5	True	False	True	Traction Control Off	Enabled	False	False
-5.0	True	False	True	Traction Control Off	Enabled	False	False
-4.5	True	False	True	Traction Control Off	Enabled	False	False
-4.0	True	False	True	Traction Control Off	Enabled	False	False
-3.5	True	False	True	Traction Control Off	Enabled	False	False
-3.0	True	False	True	Traction Control Off	Enabled	False	False
-2.5	True	False	True	Traction Control Off	Enabled	False	False
-2.0	True	False	True	Traction Control Off	Enabled	False	False
-1.5	True	False	True	Traction Control Off	Enabled	False	False
-1.0	True	False	True	Traction Control Off	Enabled	False	False
-0.5	True	False	True	Traction Control Off	Enabled	False	False
0.0	True	False	True	Traction Control Off	Enabled	False	False

Pre-Crash Data -8.0 to 0.0 sec (Record 1) - Table 7 of 7

Time (sec)	IMU Lateral Acceleration (g)	IMU Longitudinal Acceleration (g)	Red Brake Telltale On	Brake Boost Status - Eboost
-8.0	-0.044530	-0.076372	False	Normal Boost
-7.5	-0.031842	0.050874	False	Normal Boost
-7.0	-0.025376	0.050874	False	Normal Boost
-6.5	-0.025376	0.050874	False	Normal Boost
-6.0	-0.025376	0.044530	False	Normal Boost
-5.5	-0.025376	0.057218	False	Normal Boost
-5.0	-0.025376	0.050874	False	Normal Boost
-4.5	-0.025376	0.044530	False	Normal Boost
-4.0	-0.031842	0.050874	False	Normal Boost
-3.5	-0.025376	0.152866	False	Normal Boost
-3.0	-0.006344	0.184708	False	Normal Boost
-2.5	0.019032	0.248392	False	Normal Boost
-2.0	0.057218	0.235704	False	Normal Boost
-1.5	-0.006344	0.560590	False	Normal Boost
-1.0	-0.152866	0.528748	False	Normal Boost
-0.5	-0.401258	0.401258	False	Normal Boost
0.0	-0.178364	0.439566	False	Normal Boost

System Status at Event (Record 2)

Event Counter	2
Ignition Cycle Counter	858
Frontal Air Bag Warning Indicator (SIR Warning Indicator Status at Enable)	On
SIR Warning Indicator ON/OFF Time (sec)	0
Number of Ignition Cycles SIR Warning Indicator was ON/OFF Continuously	1
Ignition Cycles Since DTCs Were Last Cleared	252
Safety Belt Status, Driver (Driver Belt Switch Circuit Status)	Buckled
Safety Belt Status, Right Front Passenger (Front Passenger Belt Switch Circuit Status)	Buckled
Left Row 2 Belt Switch Circuit Status	Not Buckled
Right Row 2 Belt Switch Circuit Status	Not Buckled
Left Row 3 Belt Switch Circuit Status	Not Buckled
Right Row 3 Belt Switch Circuit Status	Not Buckled
Center Row 3 Belt Switch Circuit Status	Not Buckled
Maximum Resultant Delta-V - Longitudinal Component for FSR Event (MPH [km/h])	1 [2]
Maximum Resultant Delta-V - Lateral Component for FSR Event (MPH [km/h])	-6 [-10]
Maximum Delta-V, Longitudinal (Maximum Longitudinal SDM Recorded Vehicle Velocity Change for FSR Event) (MPH [km/h])	1 [2]
Time From FSR Time Zero to Time of the Maximum Resultant SDM Recorded Vehicle Velocity Change (msec)	110
Paired SDM Recorded Vehicle Lateral Velocity Change for Maximum Longitudinal Velocity Change (MPH [km/h])	-6 [-10]
Maximum Delta-V, Lateral (Maximum Lateral SDM Recorded Vehicle Velocity Change for FSR Event) (MPH [km/h])	-6 [-10]
Time, Maximum Delta-V (Time From FSR Time Zero to Maximum Longitudinal SDM Recorded Vehicle Velocity Change) (msec)	110
Paired SDM Recorded Vehicle Longitudinal Velocity Change for Maximum Lateral Velocity Change (MPH [km/h])	1 [2]
Time Maximum Delta-V, Lateral (Time From FSR Time Zero to Maximum Lateral SDM Recorded Vehicle Velocity Change) (msec)	110
Tire Pressure Low Indication On at Event	False
Ignition Operating Timer (msec)	842,243,622
UTC Time at Event	19:43:20
UTC Date at Event	2023/10/14
Frontal Algorithm Wakeup Time (msec)	Data Not Available
Side Algorithm Wakeup Time (msec)	0
Rear Algorithm Wakeup Time (msec)	Data Not Available
Rollover Algorithm Wakeup Time (msec)	0
Frontal Algorithm Reset Time (msec)	Data Not Available
Side Algorithm Reset Time (msec)	90
Rear Algorithm Reset Time (msec)	Data Not Available
Rollover Algorithm Reset Time (msec)	Data Not Available
Occupant Position Classification, Right Front Passenger (Front Passenger Seat Restraint Control Occupancy Status)	Yes (Occupied Adult)
Commanded State of Suppression ON (PAB Off) Indicator	Off
Commanded State of Suppression OFF (PAB On) Indicator	On
Time to Frontal Impact Pretensioner PCN Request (msec)	Data Not Available
Time to Frontal Impact Stage 1 PCN Request (msec)	Data Not Available
Time to Frontal Impact Stage 2 PCN Request (msec)	Data Not Available
Time to Left Side Impact PCN Request (msec)	Data Not Available
Time to Right Side Impact PCN Request (msec)	Data Not Available
Time to Rear Impact PCN Request (msec)	Data Not Available
Time to Rollover Impact PCN Request (msec)	Data Not Available
High Voltage Disable Notification Sent	True
Deployment Commanded in Energy Reserve Mode	False

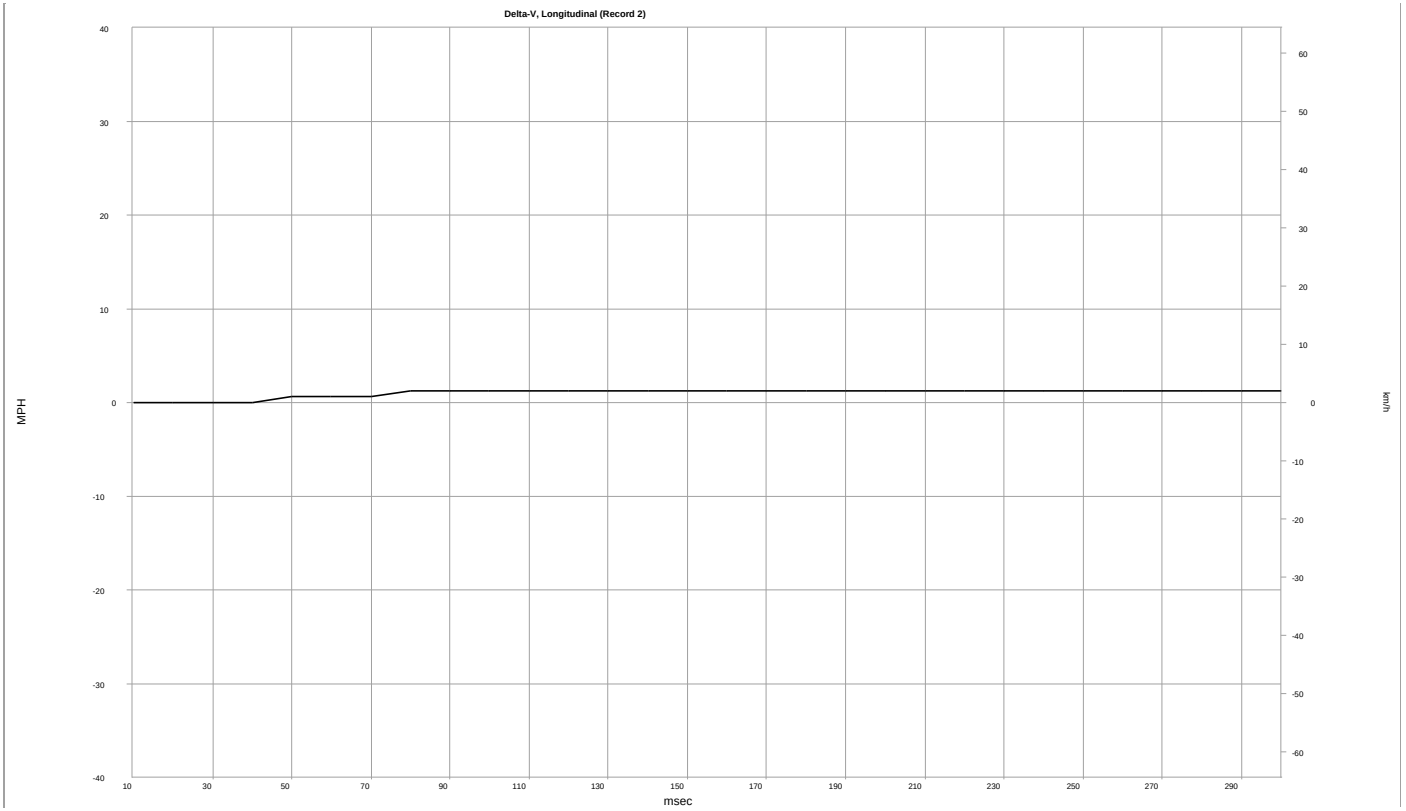
Time to Battery Disconnect Switch Side Severity (msec)	Data Not Available
Event Enable Time (T0) (msec)	842,243,622
Event End Time (Tend) (msec)	842,243,733
Complete File Recorded (Event Recording Progress and Complete Flag)	Event Recording Complete

Diagnostic Trouble Codes 0.5 Seconds Prior to Time Zero (Record 2)

DTC 1	B1A33-00
DTC 2	N/A, N/A
DTC 3	N/A, N/A
DTC 4	N/A, N/A
DTC 5	N/A, N/A
DTC 6	N/A, N/A
DTC 7	N/A, N/A
DTC 8	N/A, N/A
DTC 9	N/A, N/A

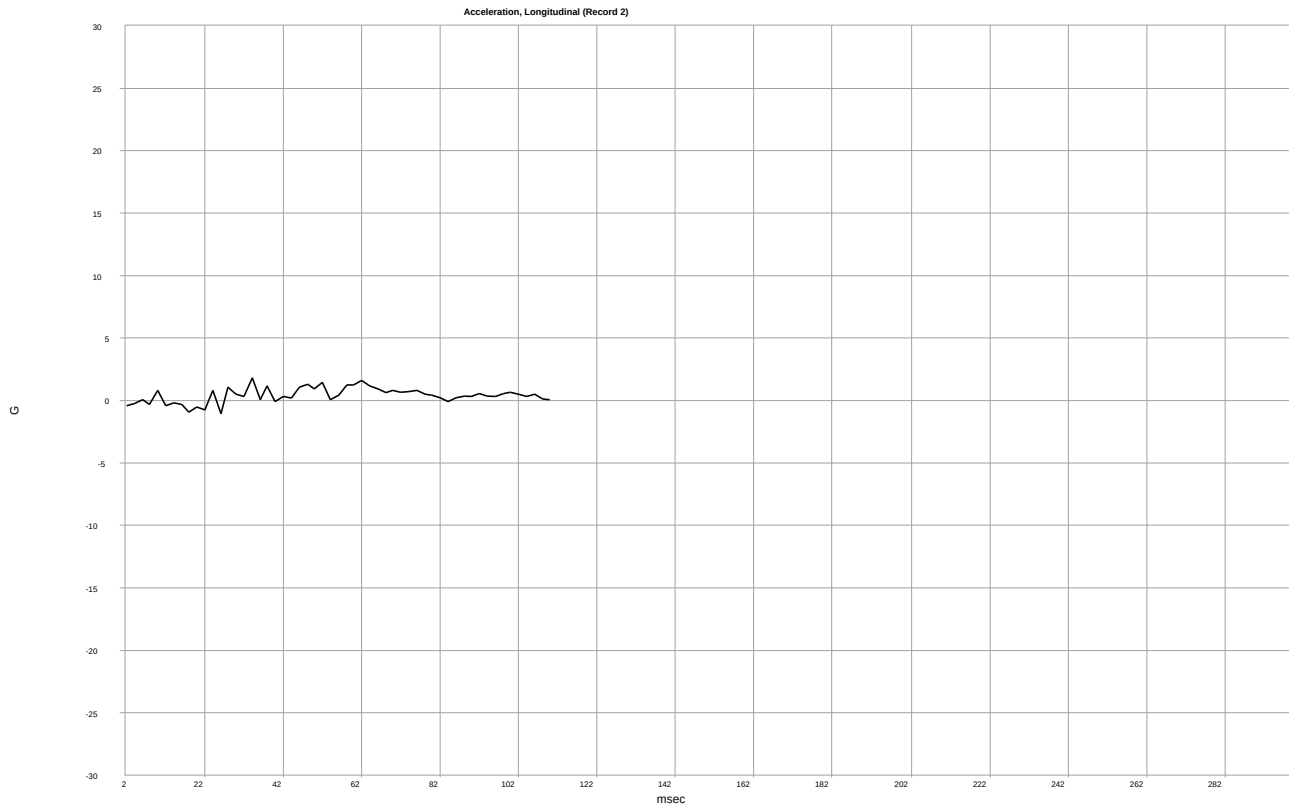
Deployment Command Data (Record 2)

Driver 1st Stage Deployment Loop Commanded (msec)	Data Not Available
Passenger 1st Stage Deployment Loop Commanded (msec)	Data Not Available
Driver 2nd Stage Deployment Loop Commanded (msec)	Data Not Available
Passenger 2nd Stage Deployment Loop Commanded (msec)	Data Not Available
Driver Pretensioner Deployment Loop #1 Commanded (msec)	Data Not Available
Passenger Pretensioner Deployment Loop #1 Commanded (msec)	Data Not Available
Driver Pretensioner Deployment Loop #2 Commanded (msec)	Data Not Available
Passenger Pretensioner Deployment Loop #2 Commanded (msec)	Data Not Available
Driver Thorax Loop Commanded (msec)	Data Not Available
Passenger Thorax Loop Commanded Passenger (msec)	Data Not Available
Left Front Roof Rail/Head Curtain Loop Commanded (msec)	Data Not Available
Right Front Roof Rail/Head Curtain Loop Commanded (msec)	Data Not Available
Driver Center Inboard Loop Commanded (msec)	Data Not Available



Longitudinal Delta-V (Record 2)

Time (msec)	Delta-V, Longitudinal (SDM Recorded Vehicle Longitudinal Velocity Change for FSR Event) (MPH [km/h])
10	0 [0]
20	0 [0]
30	0 [0]
40	0 [0]
50	1 [1]
60	1 [1]
70	1 [1]
80	1 [2]
90	1 [2]
100	1 [2]
110	1 [2]
120	1 [2]
130	1 [2]
140	1 [2]
150	1 [2]
160	1 [2]
170	1 [2]
180	1 [2]
190	1 [2]
200	1 [2]
210	1 [2]
220	1 [2]
230	1 [2]
240	1 [2]
250	1 [2]
260	1 [2]
270	1 [2]
280	1 [2]
290	1 [2]
300	1 [2]

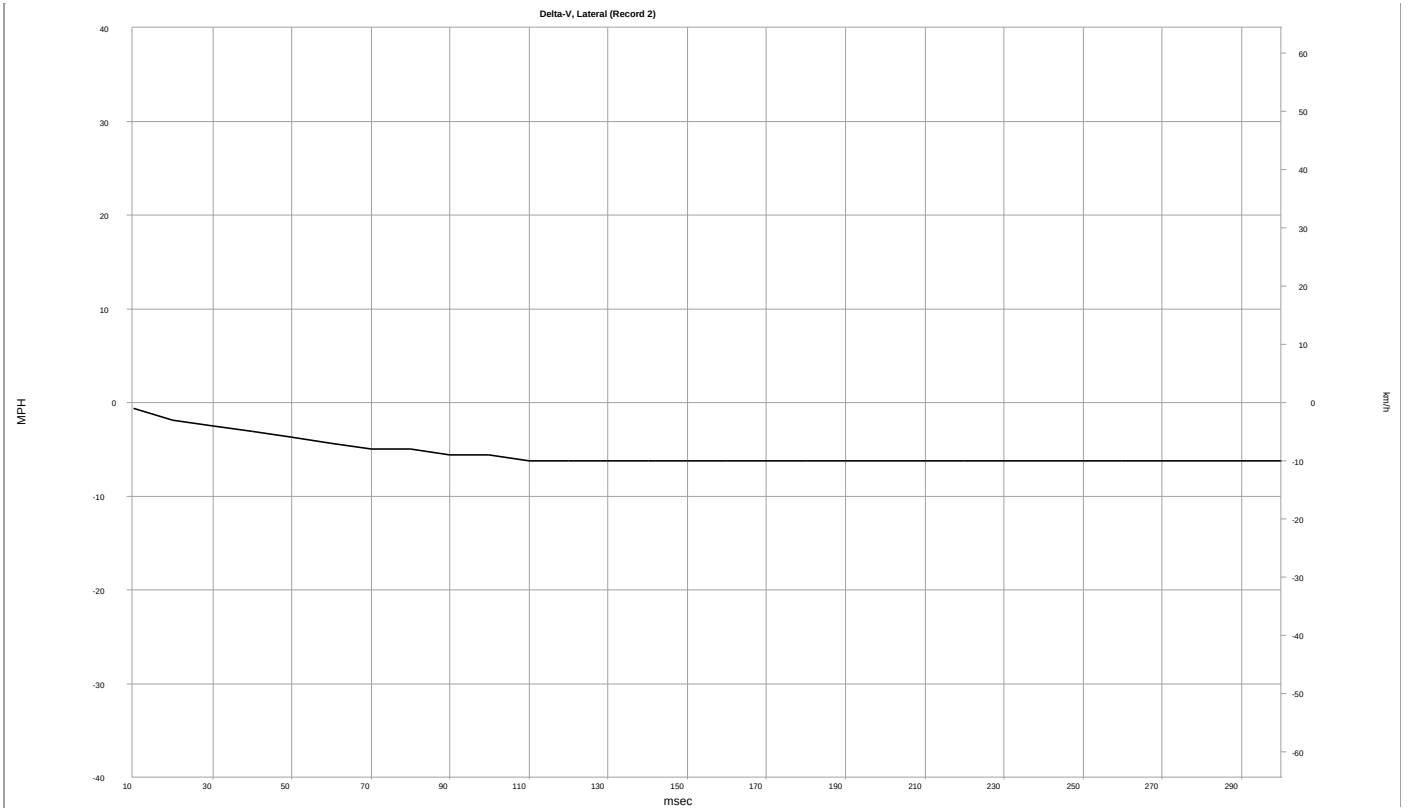


Longitudinal Acceleration (Record 2)

Time (msec)	Longitudinal Acceleration (SDM Recorded Vehicle Longitudinal Acceleration for FSR Event) (g)
2	-0.43
4	-0.24
6	0.06
8	-0.31
10	0.81
12	-0.43
14	-0.18
16	-0.31
18	-0.93
20	-0.49
22	-0.74
24	0.81
26	-1.06
28	1.06
30	0.49
32	0.31
34	1.81
36	0.06
38	1.18
40	-0.06
42	0.31
44	0.18
46	1.06
48	1.31
50	0.93
52	1.43
54	0.06
56	0.43
58	1.24
60	1.24
62	1.62
64	1.18
66	0.93
68	0.62
70	0.81
72	0.68
74	0.74
76	0.81
78	0.49
80	0.43
82	0.24
84	-0.06
86	0.24
88	0.37
90	0.31
92	0.56
94	0.37
96	0.31
98	0.56
100	0.68
102	0.49
104	0.31
106	0.49
108	0.12
110	0.06
112	Data Not Available
114	Data Not Available
116	Data Not Available

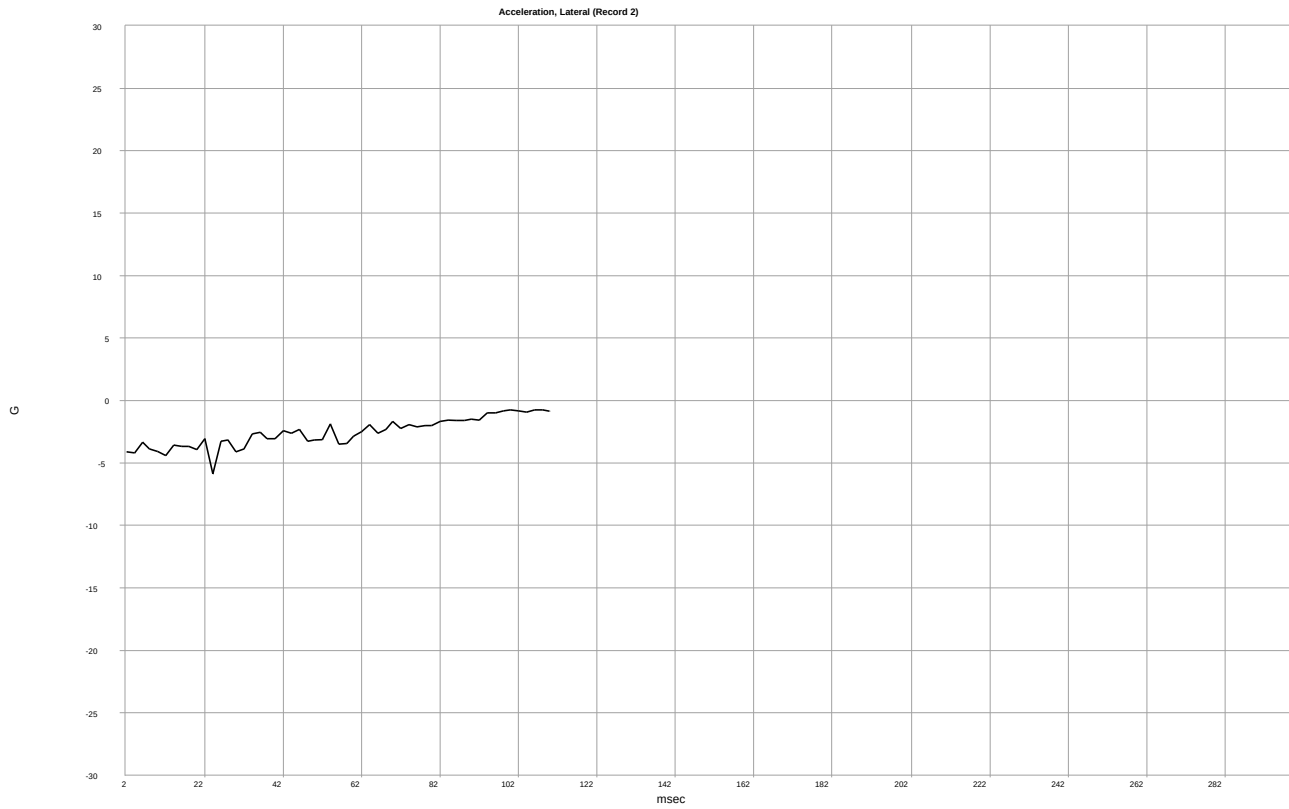
Time (msec)	Longitudinal Acceleration (SDM Recorded Vehicle Longitudinal Acceleration for FSR Event) (g)
118	Data Not Available
120	Data Not Available
122	Data Not Available
124	Data Not Available
126	Data Not Available
128	Data Not Available
130	Data Not Available
132	Data Not Available
134	Data Not Available
136	Data Not Available
138	Data Not Available
140	Data Not Available
142	Data Not Available
144	Data Not Available
146	Data Not Available
148	Data Not Available
150	Data Not Available
152	Data Not Available
154	Data Not Available
156	Data Not Available
158	Data Not Available
160	Data Not Available
162	Data Not Available
164	Data Not Available
166	Data Not Available
168	Data Not Available
170	Data Not Available
172	Data Not Available
174	Data Not Available
176	Data Not Available
178	Data Not Available
180	Data Not Available
182	Data Not Available
184	Data Not Available
186	Data Not Available
188	Data Not Available
190	Data Not Available
192	Data Not Available
194	Data Not Available
196	Data Not Available
198	Data Not Available
200	Data Not Available
202	Data Not Available
204	Data Not Available
206	Data Not Available
208	Data Not Available
210	Data Not Available
212	Data Not Available
214	Data Not Available
216	Data Not Available
218	Data Not Available
220	Data Not Available
222	Data Not Available
224	Data Not Available
226	Data Not Available
228	Data Not Available
230	Data Not Available
232	Data Not Available
234	Data Not Available
236	Data Not Available

Time (msec)	Longitudinal Acceleration (SDM Recorded Vehicle Longitudinal Acceleration for FSR Event) (g)
238	Data Not Available
240	Data Not Available
242	Data Not Available
244	Data Not Available
246	Data Not Available
248	Data Not Available
250	Data Not Available
252	Data Not Available
254	Data Not Available
256	Data Not Available
258	Data Not Available
260	Data Not Available
262	Data Not Available
264	Data Not Available
266	Data Not Available
268	Data Not Available
270	Data Not Available
272	Data Not Available
274	Data Not Available
276	Data Not Available
278	Data Not Available
280	Data Not Available
282	Data Not Available
284	Data Not Available
286	Data Not Available
288	Data Not Available
290	Data Not Available
292	Data Not Available
294	Data Not Available
296	Data Not Available
298	Data Not Available
300	Data Not Available



Lateral Delta-V (Record 2)

Time (msec)	Delta-V, Lateral (SDM Recorded Vehicle Lateral Velocity Change for FSR Event) (MPH [km/h])
10	-1 [-1]
20	-2 [-3]
30	-2 [-4]
40	-3 [-5]
50	-4 [-6]
60	-4 [-7]
70	-5 [-8]
80	-5 [-8]
90	-6 [-9]
100	-6 [-9]
110	-6 [-10]
120	-6 [-10]
130	-6 [-10]
140	-6 [-10]
150	-6 [-10]
160	-6 [-10]
170	-6 [-10]
180	-6 [-10]
190	-6 [-10]
200	-6 [-10]
210	-6 [-10]
220	-6 [-10]
230	-6 [-10]
240	-6 [-10]
250	-6 [-10]
260	-6 [-10]
270	-6 [-10]
280	-6 [-10]
290	-6 [-10]
300	-6 [-10]



Lateral Acceleration (Record 2)

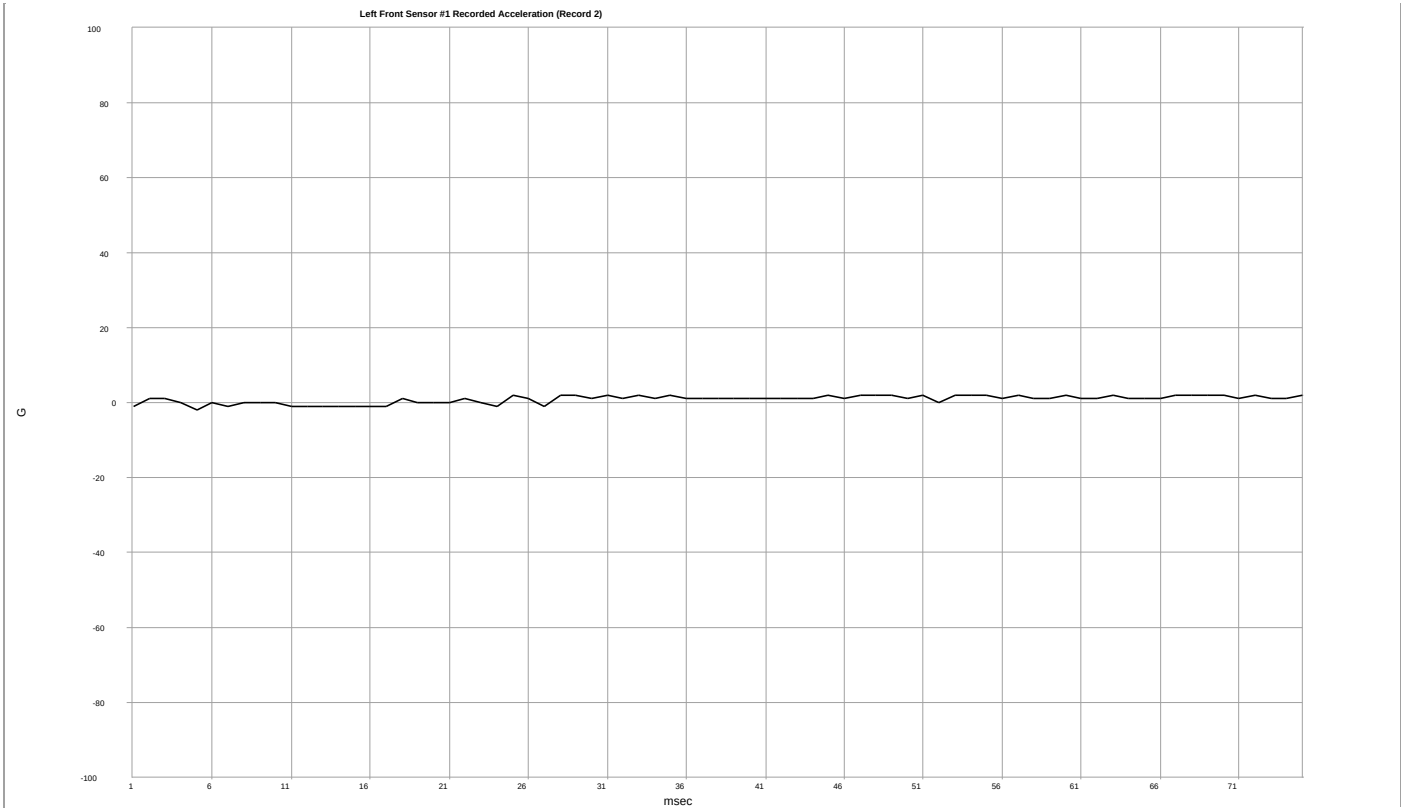
Time (msec)	Lateral Acceleration (SDM Recorded Vehicle Lateral Acceleration for FSR Event) (g)
2	-4.12
4	-4.18
6	-3.31
8	-3.87
10	-4.06
12	-4.37
14	-3.56
16	-3.68
18	-3.68
20	-3.93
22	-3.06
24	-5.87
26	-3.24
28	-3.18
30	-4.12
32	-3.87
34	-2.68
36	-2.56
38	-3.06
40	-3.06
42	-2.43
44	-2.62
46	-2.31
48	-3.24
50	-3.18
52	-3.12
54	-1.87
56	-3.49
58	-3.43
60	-2.87
62	-2.49
64	-1.93
66	-2.62
68	-2.31
70	-1.68
72	-2.24
74	-1.93
76	-2.12
78	-1.99
80	-1.99
82	-1.68
84	-1.56
86	-1.62
88	-1.62
90	-1.49
92	-1.56
94	-0.99
96	-0.99
98	-0.81
100	-0.74
102	-0.81
104	-0.93
106	-0.74
108	-0.74
110	-0.87
112	Data Not Available
114	Data Not Available
116	Data Not Available
118	Data Not Available

Time (msec)	Lateral Acceleration (SDM Recorded Vehicle Lateral Acceleration for FSR Event) (g)
120	Data Not Available
122	Data Not Available
124	Data Not Available
126	Data Not Available
128	Data Not Available
130	Data Not Available
132	Data Not Available
134	Data Not Available
136	Data Not Available
138	Data Not Available
140	Data Not Available
142	Data Not Available
144	Data Not Available
146	Data Not Available
148	Data Not Available
150	Data Not Available
152	Data Not Available
154	Data Not Available
156	Data Not Available
158	Data Not Available
160	Data Not Available
162	Data Not Available
164	Data Not Available
166	Data Not Available
168	Data Not Available
170	Data Not Available
172	Data Not Available
174	Data Not Available
176	Data Not Available
178	Data Not Available
180	Data Not Available
182	Data Not Available
184	Data Not Available
186	Data Not Available
188	Data Not Available
190	Data Not Available
192	Data Not Available
194	Data Not Available
196	Data Not Available
198	Data Not Available
200	Data Not Available
202	Data Not Available
204	Data Not Available
206	Data Not Available
208	Data Not Available
210	Data Not Available
212	Data Not Available
214	Data Not Available
216	Data Not Available
218	Data Not Available
220	Data Not Available
222	Data Not Available
224	Data Not Available
226	Data Not Available
228	Data Not Available
230	Data Not Available
232	Data Not Available
234	Data Not Available
236	Data Not Available
238	Data Not Available
240	Data Not Available

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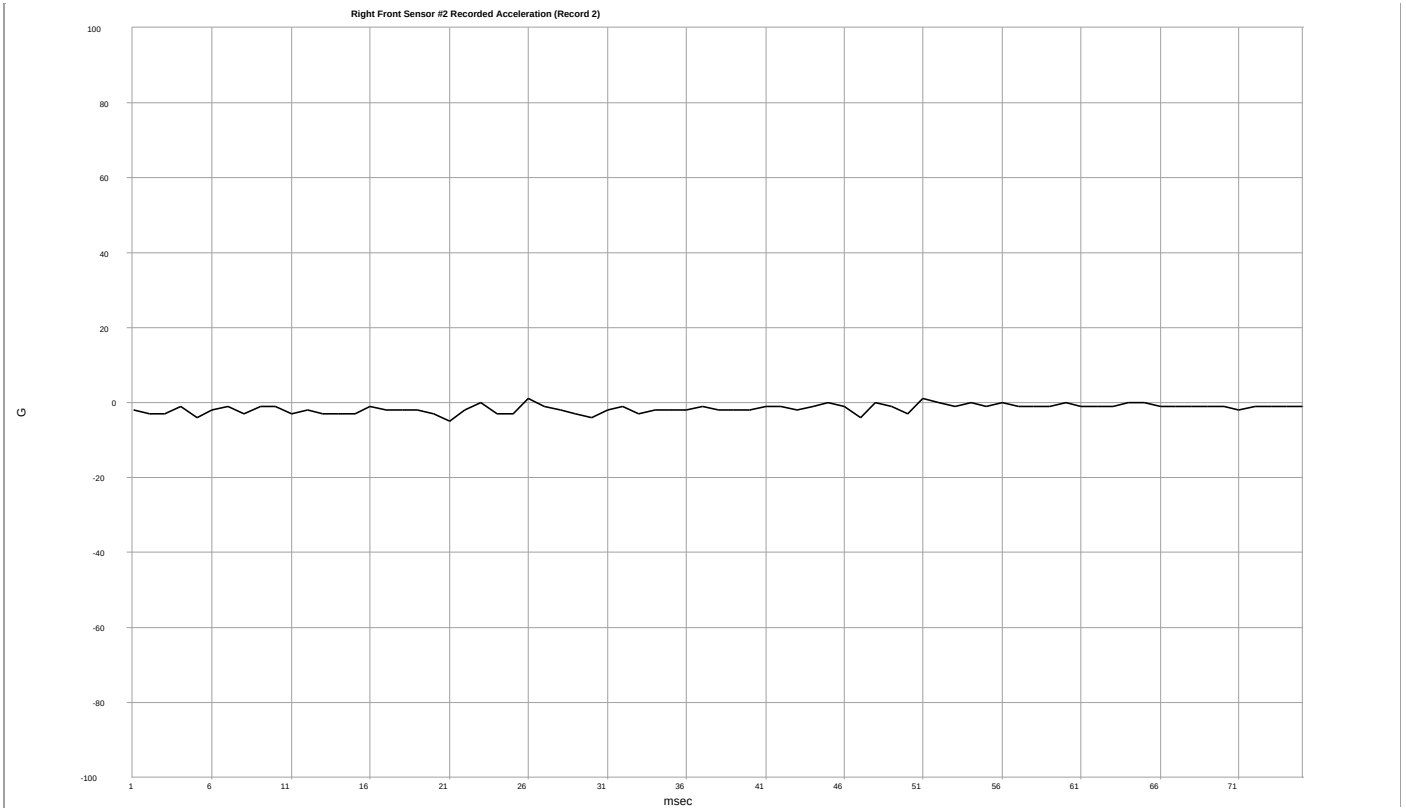
Time (msec)	Lateral Acceleration (SDM Recorded Vehicle Lateral Acceleration for FSR Event) (g)
242	Data Not Available
244	Data Not Available
246	Data Not Available
248	Data Not Available
250	Data Not Available
252	Data Not Available
254	Data Not Available
256	Data Not Available
258	Data Not Available
260	Data Not Available
262	Data Not Available
264	Data Not Available
266	Data Not Available
268	Data Not Available
270	Data Not Available
272	Data Not Available
274	Data Not Available
276	Data Not Available
278	Data Not Available
280	Data Not Available
282	Data Not Available
284	Data Not Available
286	Data Not Available
288	Data Not Available
290	Data Not Available
292	Data Not Available
294	Data Not Available
296	Data Not Available
298	Data Not Available
300	Data Not Available



Left Front Sensor #1 Recorded Acceleration (Record 2)

Time (msec)	Left Front Sensor #1 Recorded Acceleration (g)
1	-1.00
2	1.00
3	1.00
4	0.00
5	-2.00
6	0.00
7	-1.00
8	0.00
9	0.00
10	0.00
11	-1.00
12	-1.00
13	-1.00
14	-1.00
15	-1.00
16	-1.00
17	-1.00
18	1.00
19	0.00
20	0.00
21	0.00
22	1.00
23	0.00
24	-1.00
25	2.00
26	1.00
27	-1.00
28	2.00
29	2.00
30	1.00
31	2.00
32	1.00
33	2.00
34	1.00
35	2.00
36	1.00
37	1.00
38	1.00
39	1.00
40	1.00
41	1.00
42	1.00
43	1.00
44	1.00
45	2.00
46	1.00
47	2.00
48	2.00
49	2.00
50	1.00
51	2.00
52	0.00
53	2.00
54	2.00
55	2.00
56	1.00
57	2.00
58	1.00
59	1.00

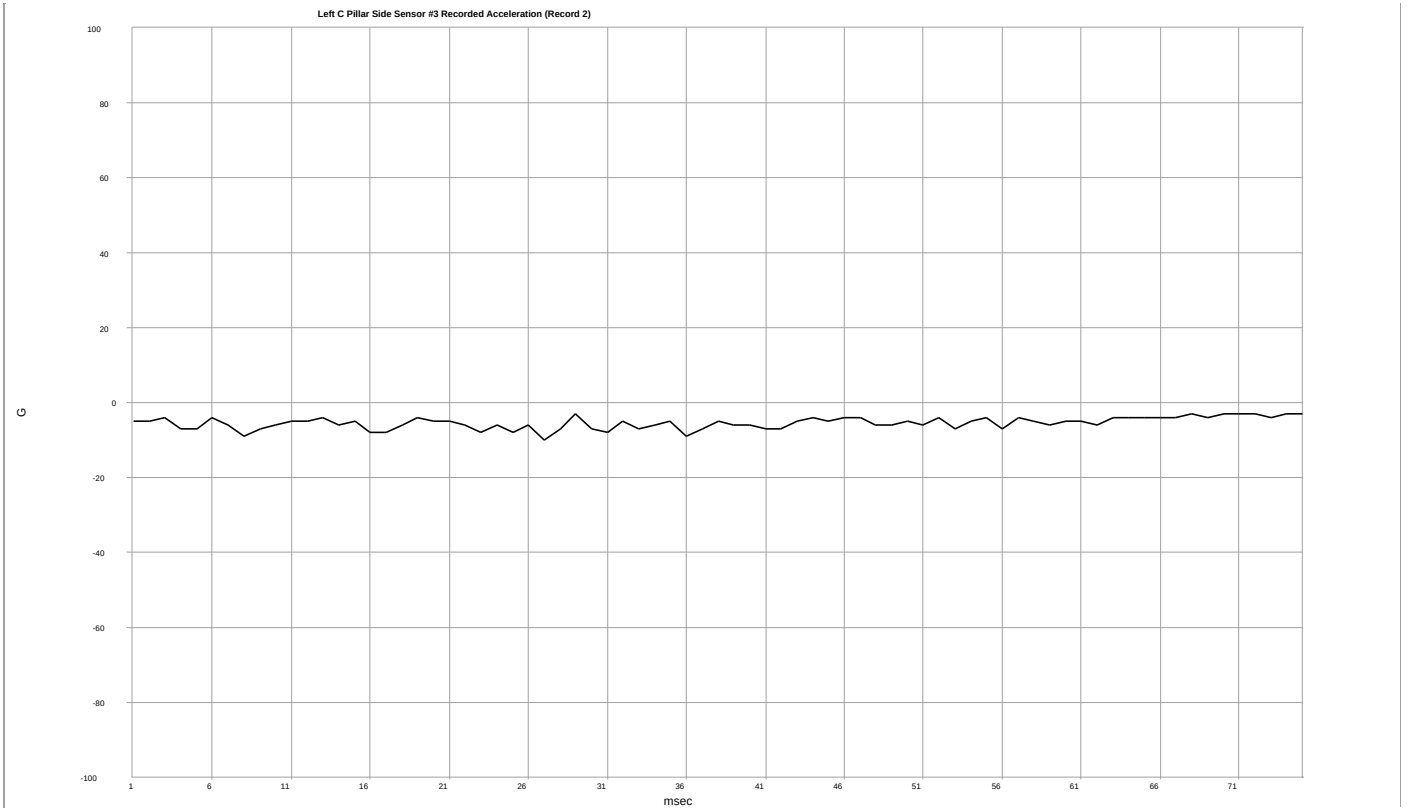
Time (msec)	Left Front Sensor #1 Recorded Acceleration (g)
60	2.00
61	1.00
62	1.00
63	2.00
64	1.00
65	1.00
66	1.00
67	2.00
68	2.00
69	2.00
70	2.00
71	1.00
72	2.00
73	1.00
74	1.00
75	2.00



Right Front Sensor #2 Recorded Acceleration (Record 2)

Time (msec)	Right Front Sensor #2 Recorded Acceleration (g)
1	-2.00
2	-3.00
3	-3.00
4	-1.00
5	-4.00
6	-2.00
7	-1.00
8	-3.00
9	-1.00
10	-1.00
11	-3.00
12	-2.00
13	-3.00
14	-3.00
15	-3.00
16	-1.00
17	-2.00
18	-2.00
19	-2.00
20	-3.00
21	-5.00
22	-2.00
23	0.00
24	-3.00
25	-3.00
26	1.00
27	-1.00
28	-2.00
29	-3.00
30	-4.00
31	-2.00
32	-1.00
33	-3.00
34	-2.00
35	-2.00
36	-2.00
37	-1.00
38	-2.00
39	-2.00
40	-2.00
41	-1.00
42	-1.00
43	-2.00
44	-1.00
45	0.00
46	-1.00
47	-4.00
48	0.00
49	-1.00
50	-3.00
51	1.00
52	0.00
53	-1.00
54	0.00
55	-1.00
56	0.00
57	-1.00
58	-1.00
59	-1.00

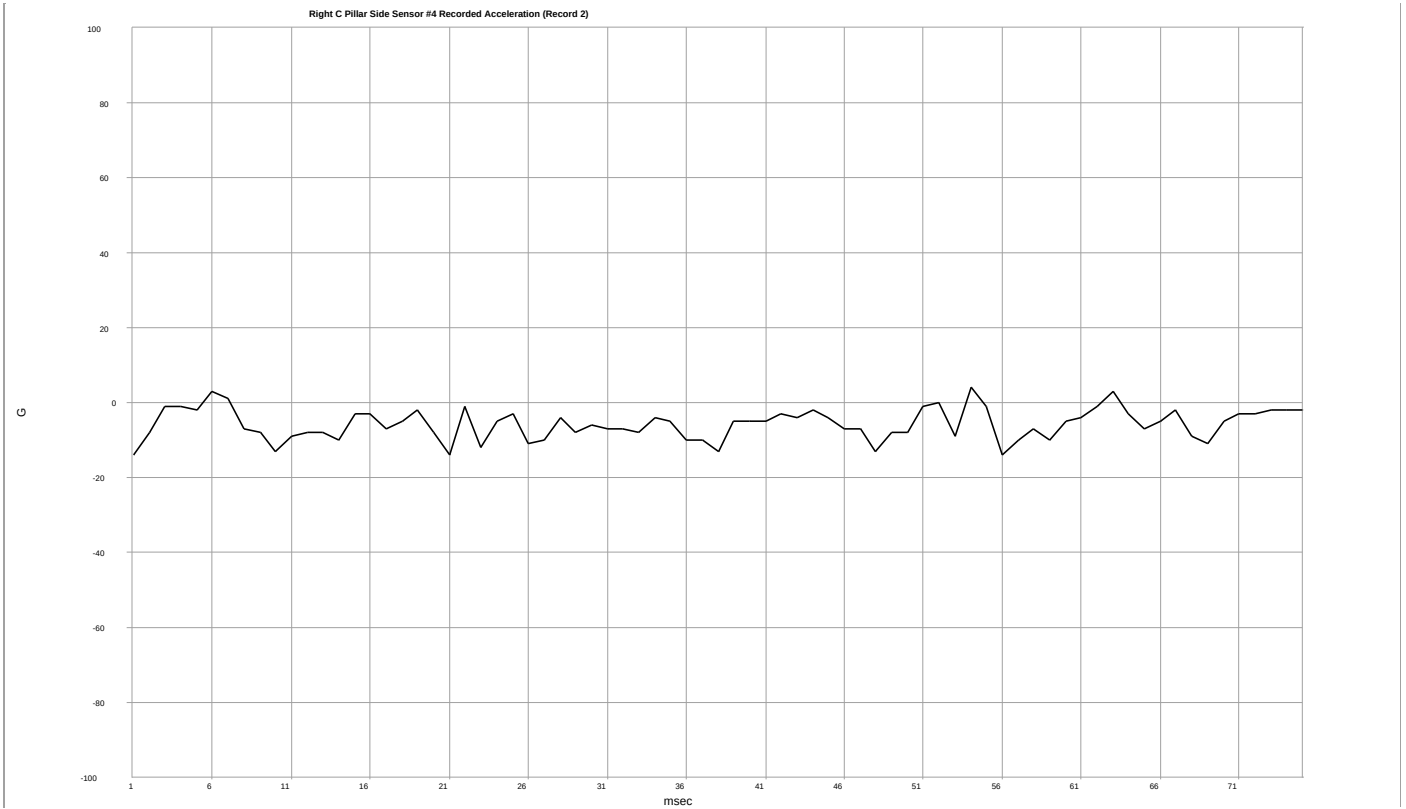
Time (msec)	Right Front Sensor #2 Recorded Acceleration (g)
60	0.00
61	-1.00
62	-1.00
63	-1.00
64	0.00
65	0.00
66	-1.00
67	-1.00
68	-1.00
69	-1.00
70	-1.00
71	-2.00
72	-1.00
73	-1.00
74	-1.00
75	-1.00



Left C Pillar Side Sensor #3 Recorded Acceleration (Record 2)

Time (msec)	Left C Pillar Side Sensor #3 Recorded Acceleration (g)
1	-5.00
2	-5.00
3	-4.00
4	-7.00
5	-7.00
6	-4.00
7	-6.00
8	-9.00
9	-7.00
10	-6.00
11	-5.00
12	-5.00
13	-4.00
14	-6.00
15	-5.00
16	-8.00
17	-8.00
18	-6.00
19	-4.00
20	-5.00
21	-5.00
22	-6.00
23	-8.00
24	-6.00
25	-8.00
26	-6.00
27	-10.00
28	-7.00
29	-3.00
30	-7.00
31	-8.00
32	-5.00
33	-7.00
34	-6.00
35	-5.00
36	-9.00
37	-7.00
38	-5.00
39	-6.00
40	-6.00
41	-7.00
42	-7.00
43	-5.00
44	-4.00
45	-5.00
46	-4.00
47	-4.00
48	-6.00
49	-6.00
50	-5.00
51	-6.00
52	-4.00
53	-7.00
54	-5.00
55	-4.00
56	-7.00
57	-4.00
58	-5.00
59	-6.00

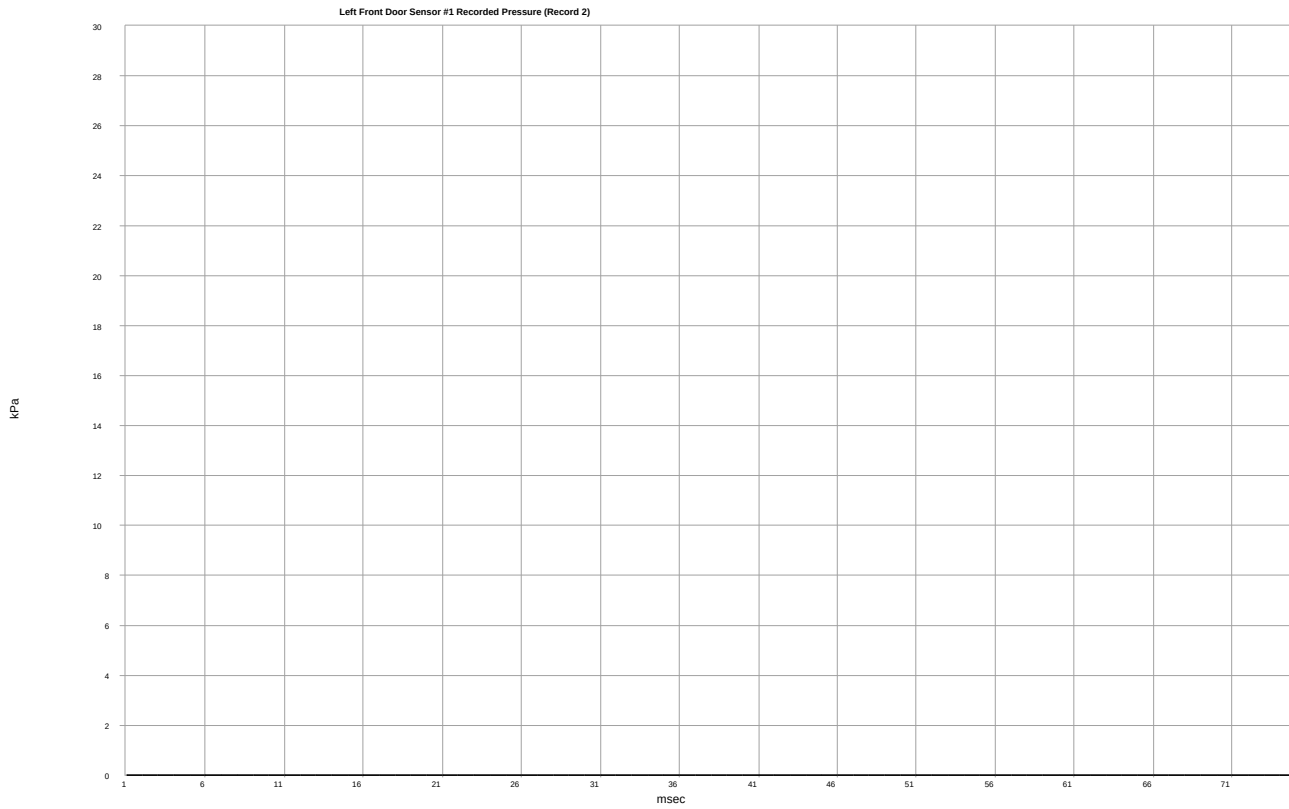
Time (msec)	Left C Pillar Side Sensor #3 Recorded Acceleration (g)
60	-5.00
61	-5.00
62	-6.00
63	-4.00
64	-4.00
65	-4.00
66	-4.00
67	-4.00
68	-3.00
69	-4.00
70	-3.00
71	-3.00
72	-3.00
73	-4.00
74	-3.00
75	-3.00



Right C Pillar Side Sensor #4 Recorded Acceleration (Record 2)

Time (msec)	Right C Pillar Side Sensor #4 Recorded Acceleration (g)
1	-14.00
2	-8.00
3	-1.00
4	-1.00
5	-2.00
6	3.00
7	1.00
8	-7.00
9	-8.00
10	-13.00
11	-9.00
12	-8.00
13	-8.00
14	-10.00
15	-3.00
16	-3.00
17	-7.00
18	-5.00
19	-2.00
20	-8.00
21	-14.00
22	-1.00
23	-12.00
24	-5.00
25	-3.00
26	-11.00
27	-10.00
28	-4.00
29	-8.00
30	-6.00
31	-7.00
32	-7.00
33	-8.00
34	-4.00
35	-5.00
36	-10.00
37	-10.00
38	-13.00
39	-5.00
40	-5.00
41	-5.00
42	-3.00
43	-4.00
44	-2.00
45	-4.00
46	-7.00
47	-7.00
48	-13.00
49	-8.00
50	-8.00
51	-1.00
52	0.00
53	-9.00
54	4.00
55	-1.00
56	-14.00
57	-10.00
58	-7.00
59	-10.00

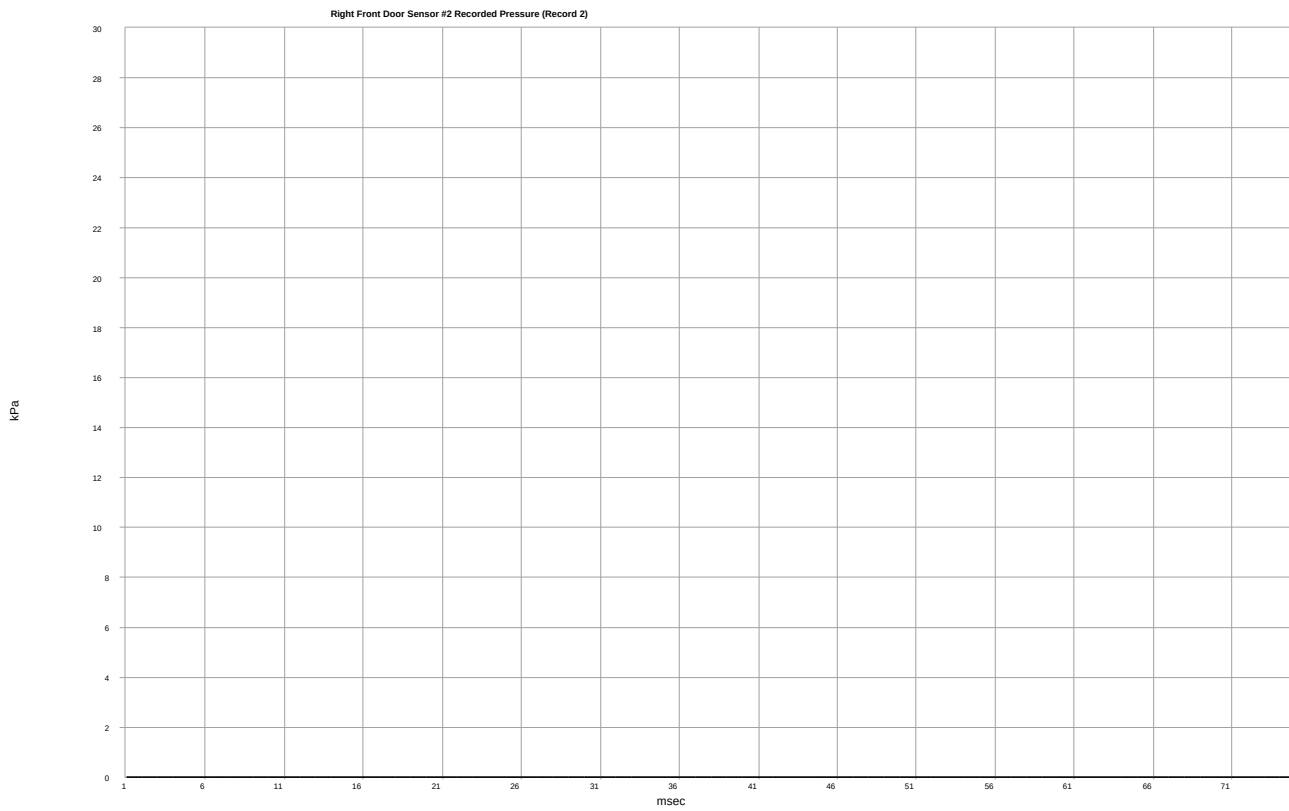
Time (msec)	Right C Pillar Side Sensor #4 Recorded Acceleration (g)
60	-5.00
61	-4.00
62	-1.00
63	3.00
64	-3.00
65	-7.00
66	-5.00
67	-2.00
68	-9.00
69	-11.00
70	-5.00
71	-3.00
72	-3.00
73	-2.00
74	-2.00
75	-2.00



Left Front Door Sensor #1 Recorded Pressure (Record 2)

Time (msec)	Left Front Door Sensor #1 Recorded Pressure (kPa)
1	0.0
2	0.0
3	0.0
4	0.0
5	0.0
6	0.0
7	0.0
8	0.0
9	0.0
10	0.0
11	0.0
12	0.0
13	0.0
14	0.0
15	0.0
16	0.0
17	0.0
18	0.0
19	0.0
20	0.0
21	0.0
22	0.0
23	0.0
24	0.0
25	0.0
26	0.0
27	0.0
28	0.0
29	0.0
30	0.0
31	0.0
32	0.0
33	0.0
34	0.0
35	0.0
36	0.0
37	0.0
38	0.0
39	0.0
40	0.0
41	0.0
42	0.0
43	0.0
44	0.0
45	0.0
46	0.0
47	0.0
48	0.0
49	0.0
50	0.0
51	0.0
52	0.0
53	0.0
54	0.0
55	0.0
56	0.0
57	0.0
58	0.0
59	0.0

Time (msec)	Left Front Door Sensor #1 Recorded Pressure (kPa)
60	0.0
61	0.0
62	0.0
63	0.0
64	0.0
65	0.0
66	0.0
67	0.0
68	0.0
69	0.0
70	0.0
71	0.0
72	0.0
73	0.0
74	0.0
75	0.0



Right Front Door Sensor #2 Recorded Pressure (Record 2)

Time (msec)	Right Front Door Sensor #2 Recorded Pressure (kPa)
1	0.0
2	0.0
3	0.0
4	0.0
5	0.0
6	0.0
7	0.0
8	0.0
9	0.0
10	0.0
11	0.0
12	0.0
13	0.0
14	0.0
15	0.0
16	0.0
17	0.0
18	0.0
19	0.0
20	0.0
21	0.0
22	0.0
23	0.0
24	0.0
25	0.0
26	0.0
27	0.0
28	0.0
29	0.0
30	0.0
31	0.0
32	0.0
33	0.0
34	0.0
35	0.0
36	0.0
37	0.0
38	0.0
39	0.0
40	0.0
41	0.0
42	0.0
43	0.0
44	0.0
45	0.0
46	0.0
47	0.0
48	0.0
49	0.0
50	0.0
51	0.0
52	0.0
53	0.0
54	0.0
55	0.0
56	0.0
57	0.0
58	0.0
59	0.0

Time (msec)	Right Front Door Sensor #2 Recorded Pressure (kPa)
60	0.0
61	0.0
62	0.0
63	0.0
64	0.0
65	0.0
66	0.0
67	0.0
68	0.0
69	0.0
70	0.0
71	0.0
72	0.0
73	0.0
74	0.0
75	0.0

Pre-Crash Data -8.0 to 0.0 sec (Record 2) - Table 1 of 7

Time (sec)	Accelerator Pedal, % Full (%)	ABS Activity	Brake Pedal Position (%)	Driver Applied Brake Pedal Pressure (kPa)	Driver Applied Brake Pedal Pressure Detected	Service Brake, On/Off (Brake Pedal Initial Travel Achieved)	Cruise and Speed Limiter Switch Status
-8.0	0	Off	12	81	True	On (True)	No Activation
-7.5	0	Off	8	81	False	On (True)	No Activation
-7.0	0	Off	0	0	False	Off (False)	No Activation
-6.5	0	Off	14	567	True	On (True)	No Activation
-6.0	0	Off	29	891	True	On (True)	No Activation
-5.5	0	Off	29	810	True	On (True)	No Activation
-5.0	0	Off	22	486	True	On (True)	No Activation
-4.5	14	Off	0	0	False	Off (False)	No Activation
-4.0	14	Off	0	0	False	Off (False)	No Activation
-3.5	18	Off	0	0	False	Off (False)	No Activation
-3.0	18	Off	0	0	False	Off (False)	No Activation
-2.5	36	Off	0	0	False	Off (False)	No Activation
-2.0	99	Off	0	0	False	Off (False)	No Activation
-1.5	99	Off	0	0	False	Off (False)	No Activation
-1.0	99	Off	0	0	False	Off (False)	No Activation
-0.5	99	Off	Data Not Available	0	False	Data Not Available	Data Not Available
0.0	99	Off	Data Not Available	0	False	Data Not Available	Data Not Available

Pre-Crash Data -8.0 to 0.0 sec (Record 2) - Table 2 of 7

Time (sec)	Cruise Secondary Switch Status	Conventional Cruise Control	Adaptive Cruise Control Selected Mode	Adaptive Cruise Control	Transmission Estimated Gear	Transmission Shift Lever Position	Reduced Engine Power Mode Indicator On
-8.0	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-7.5	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-7.0	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-6.5	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-6.0	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-5.5	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-5.0	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-4.5	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-4.0	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-3.5	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-3.0	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-2.5	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-2.0	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-1.5	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-1.0	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-0.5	Data Not Available	Inactive	Enhanced Cruise Control	Inactive	Unknown	Lever Position Unknown	Data Not Available
0.0	Data Not Available	Inactive	Enhanced Cruise Control	Inactive	Unknown	Lever Position Unknown	Data Not Available

Pre-Crash Data -8.0 to 0.0 sec (Record 2) - Table 3 of 7

Time (sec)	Engine RPM (Engine Speed)	Engine Torque (Nm [Ft Lbs])	Engine Throttle, % Full (%)	Speed, Vehicle Indicated (MPH [km/h])	IMU Yaw Rate (deg/sec)	Right Front Wheel Angular Speed (RPM)	Left Front Wheel Angular Speed (RPM)
-8.0	588	43.0 [31.7]	6	0 [0]	-0.216	0	0
-7.5	561	42.5 [31.3]	6	0 [0]	-0.120	0	0
-7.0	561	42.5 [31.3]	5	0 [0]	-0.144	0	0
-6.5	566	40.0 [29.5]	5	0 [0]	-0.144	0	0
-6.0	567	38.5 [28.4]	5	0 [0]	-0.192	0	0
-5.5	574	38.0 [28.0]	5	0 [0]	-0.120	0	0
-5.0	568	36.5 [26.9]	5	0 [0]	-0.144	0	0
-4.5	593	79.0 [58.3]	5	0 [0]	-0.120	0	0
-4.0	1,210	167.0 [123.2]	18	0 [0]	-0.144	0	0
-3.5	1,411	162.0 [119.5]	22	1 [2]	0.384	18	17
-3.0	1,621	197.0 [145.3]	27	3 [5]	4.104	39	37
-2.5	1,642	193.5 [142.7]	27	5 [8]	11.760	64	55
-2.0	2,638	535.5 [395.0]	74	9 [14]	5.520	98	94
-1.5	2,940	559.0 [412.3]	99	14 [22]	-1.680	160	160
-1.0	3,603	562.5 [414.9]	99	19 [31]	-15.384	217	219
-0.5	Data Not Available	61.5 [45.4]	99	Data Not Available	Data Not Available	316	24
0.0	Data Not Available	-43.0 [-31.7]	99	Data Not Available	Data Not Available	106	120

Pre-Crash Data -8.0 to 0.0 sec (Record 2) - Table 4 of 7

Time (sec)	Right Rear Wheel Angular Speed (RPM)	Left Rear Wheel Angular Speed (RPM)	Steering Wheel Angle (deg)	Propulsion System Active	System Power Mode	Backup System Power Mode	SDM Power Mode
-8.0	0	0	25	True	Propulsion	Propulsion	Propulsion
-7.5	0	0	27	True	Propulsion	Propulsion	Propulsion
-7.0	0	0	28	True	Propulsion	Propulsion	Propulsion
-6.5	0	0	28	True	Propulsion	Propulsion	Propulsion
-6.0	0	0	28	True	Propulsion	Propulsion	Propulsion
-5.5	0	0	27	True	Propulsion	Propulsion	Propulsion
-5.0	0	0	27	True	Propulsion	Propulsion	Propulsion
-4.5	0	0	27	True	Propulsion	Propulsion	Propulsion
-4.0	0	0	27	True	Propulsion	Propulsion	Propulsion
-3.5	18	18	60	True	Propulsion	Propulsion	Propulsion
-3.0	38	37	174	True	Propulsion	Propulsion	Propulsion
-2.5	62	59	258	True	Propulsion	Propulsion	Propulsion
-2.0	97	93	92	True	Propulsion	Propulsion	Propulsion
-1.5	159	159	-25	True	Propulsion	Propulsion	Propulsion
-1.0	212	217	-134	True	Propulsion	Propulsion	Propulsion
-0.5	487	85	-71	True	Propulsion	Propulsion	Propulsion
0.0	103	337	-54	Data Not Available	Propulsion	Propulsion	Propulsion

Pre-Crash Data -8.0 to 0.0 sec (Record 2) - Table 5 of 7

Time (sec)	Ignition Status	Ignition Prolongation Timer (sec)	Secondary Collision Prolongation Timer (sec)	Antilock Brake System Failed	Brake Pedal Override Flag	Automatic Brake Status	Electronic Stability Control Status
-8.0	On	5.0	0.0	False	False	Not Active	Normal Operation
-7.5	On	5.0	0.0	False	False	Not Active	Normal Operation
-7.0	On	5.0	0.0	False	False	Not Active	Normal Operation
-6.5	On	5.0	0.0	False	False	Not Active	Normal Operation
-6.0	On	5.0	0.0	False	False	Not Active	Normal Operation
-5.5	On	5.0	0.0	False	False	Not Active	Normal Operation
-5.0	On	5.0	0.0	False	False	Not Active	Normal Operation
-4.5	On	5.0	0.0	False	False	Not Active	Normal Operation
-4.0	On	5.0	0.0	False	False	Not Active	Normal Operation
-3.5	On	5.0	0.0	False	False	Not Active	Normal Operation
-3.0	On	5.0	0.0	False	False	Not Active	Normal Operation
-2.5	On	5.0	0.0	False	False	Not Active	Normal Operation
-2.0	On	5.0	0.0	False	False	Not Active	Normal Operation
-1.5	On	5.0	0.0	False	False	Not Active	Normal Operation
-1.0	On	5.0	0.0	False	False	Not Active	Normal Operation
-0.5	On	5.0	0.0	False	False	Failed	Failed
0.0	On	5.0	0.0	False	False	Failed	Failed

Pre-Crash Data -8.0 to 0.0 sec (Record 2) - Table 6 of 7

Time (sec)	Traction Control System Present	Traction Control System Failed	Traction Control System Enabled	Traction Control System Active	Traction Control System Switch Status	Left Turn Signal Switch Active	Right Turn Signal Switch Active
-8.0	True	False	True	Traction Control Off	Enabled	False	False
-7.5	True	False	True	Traction Control Off	Enabled	False	False
-7.0	True	False	True	Traction Control Off	Enabled	False	False
-6.5	True	False	True	Traction Control Off	Enabled	False	False
-6.0	True	False	True	Traction Control Off	Enabled	False	False
-5.5	True	False	True	Traction Control Off	Enabled	False	False
-5.0	True	False	True	Traction Control Off	Enabled	False	False
-4.5	True	False	True	Traction Control Off	Enabled	False	False
-4.0	True	False	True	Traction Control Off	Enabled	False	False
-3.5	True	False	True	Traction Control Off	Enabled	False	False
-3.0	True	False	True	Traction Control Off	Enabled	False	False
-2.5	True	False	True	Traction Control Off	Enabled	False	False
-2.0	True	False	True	Traction Control Off	Enabled	False	False
-1.5	True	False	True	Traction Control Off	Enabled	False	False
-1.0	True	False	True	Traction Control Off	Enabled	False	False
-0.5	True	True	False	Traction Control Off	Enabled	False	False
0.0	True	True	False	Traction Control Off	Enabled	False	False

Pre-Crash Data -8.0 to 0.0 sec (Record 2) - Table 7 of 7

Time (sec)	IMU Lateral Acceleration (g)	IMU Longitudinal Acceleration (g)	Red Brake Telltale On	Brake Boost Status - Eboost
-8.0	-0.031842	0.050874	False	Normal Boost
-7.5	-0.025376	0.050874	False	Normal Boost
-7.0	-0.025376	0.050874	False	Normal Boost
-6.5	-0.025376	0.044530	False	Normal Boost
-6.0	-0.025376	0.057218	False	Normal Boost
-5.5	-0.025376	0.050874	False	Normal Boost
-5.0	-0.025376	0.044530	False	Normal Boost
-4.5	-0.031842	0.050874	False	Normal Boost
-4.0	-0.025376	0.152866	False	Normal Boost
-3.5	-0.006344	0.184708	False	Normal Boost
-3.0	0.019032	0.248392	False	Normal Boost
-2.5	0.057218	0.235704	False	Normal Boost
-2.0	-0.006344	0.560590	False	Normal Boost
-1.5	-0.152866	0.528748	False	Normal Boost
-1.0	-0.401258	0.401258	False	Normal Boost
-0.5	0.515938	0.050874	False	Normal Boost
0.0	2.331786	0.337574	False	Normal Boost

System Status at Event (Record 3)

Event Counter	3
Ignition Cycle Counter	858
Frontal Air Bag Warning Indicator (SIR Warning Indicator Status at Enable)	Off
SIR Warning Indicator ON/OFF Time (sec)	Reserved
Number of Ignition Cycles SIR Warning Indicator was ON/OFF Continuously	858
Ignition Cycles Since DTCs Were Last Cleared	252
Safety Belt Status, Driver (Driver Belt Switch Circuit Status)	Buckled
Safety Belt Status, Right Front Passenger (Front Passenger Belt Switch Circuit Status)	Buckled
Left Row 2 Belt Switch Circuit Status	Not Buckled
Right Row 2 Belt Switch Circuit Status	Not Buckled
Left Row 3 Belt Switch Circuit Status	Not Buckled
Right Row 3 Belt Switch Circuit Status	Not Buckled
Center Row 3 Belt Switch Circuit Status	Not Buckled
Maximum Resultant Delta-V - Longitudinal Component for FSR Event (MPH [km/h])	Data Not Available
Maximum Resultant Delta-V - Lateral Component for FSR Event (MPH [km/h])	Data Not Available
Maximum Delta-V, Longitudinal (Maximum Longitudinal SDM Recorded Vehicle Velocity Change for FSR Event) (MPH [km/h])	0 [0]
Time From FSR Time Zero to Time of the Maximum Resultant SDM Recorded Vehicle Velocity Change (msec)	Data Not Available
Paired SDM Recorded Vehicle Lateral Velocity Change for Maximum Longitudinal Velocity Change (MPH [km/h])	0 [0]
Maximum Delta-V, Lateral (Maximum Lateral SDM Recorded Vehicle Velocity Change for FSR Event) (MPH [km/h])	0 [0]
Time, Maximum Delta-V (Time From FSR Time Zero to Maximum Longitudinal SDM Recorded Vehicle Velocity Change) (msec)	Data Not Available
Paired SDM Recorded Vehicle Longitudinal Velocity Change for Maximum Lateral Velocity Change (MPH [km/h])	0 [0]
Time Maximum Delta-V, Lateral (Time From FSR Time Zero to Maximum Lateral SDM Recorded Vehicle Velocity Change) (msec)	Data Not Available
Tire Pressure Low Indication On at Event	False
Ignition Operating Timer (msec)	842,243,096
UTC Time at Event	19:43:20
UTC Date at Event	2023/10/14
Frontal Algorithm Wakeup Time (msec)	0
Side Algorithm Wakeup Time (msec)	0
Rear Algorithm Wakeup Time (msec)	0
Rollover Algorithm Wakeup Time (msec)	21
Frontal Algorithm Reset Time (msec)	152
Side Algorithm Reset Time (msec)	104
Rear Algorithm Reset Time (msec)	57
Rollover Algorithm Reset Time (msec)	4,935
Occupant Position Classification, Right Front Passenger (Front Passenger Seat Restraint Control Occupancy Status)	Yes (Occupied Adult)
Commanded State of Suppression ON (PAB Off) Indicator	Off
Commanded State of Suppression OFF (PAB On) Indicator	On
Time to Frontal Impact Pretensioner PCN Request (msec)	Data Not Available
Time to Frontal Impact Stage 1 PCN Request (msec)	Data Not Available
Time to Frontal Impact Stage 2 PCN Request (msec)	Data Not Available
Time to Left Side Impact PCN Request (msec)	0
Time to Right Side Impact PCN Request (msec)	32
Time to Rear Impact PCN Request (msec)	Data Not Available
Time to Rollover Impact PCN Request (msec)	810
High Voltage Disable Notification Sent	True
Deployment Commanded in Energy Reserve Mode	False

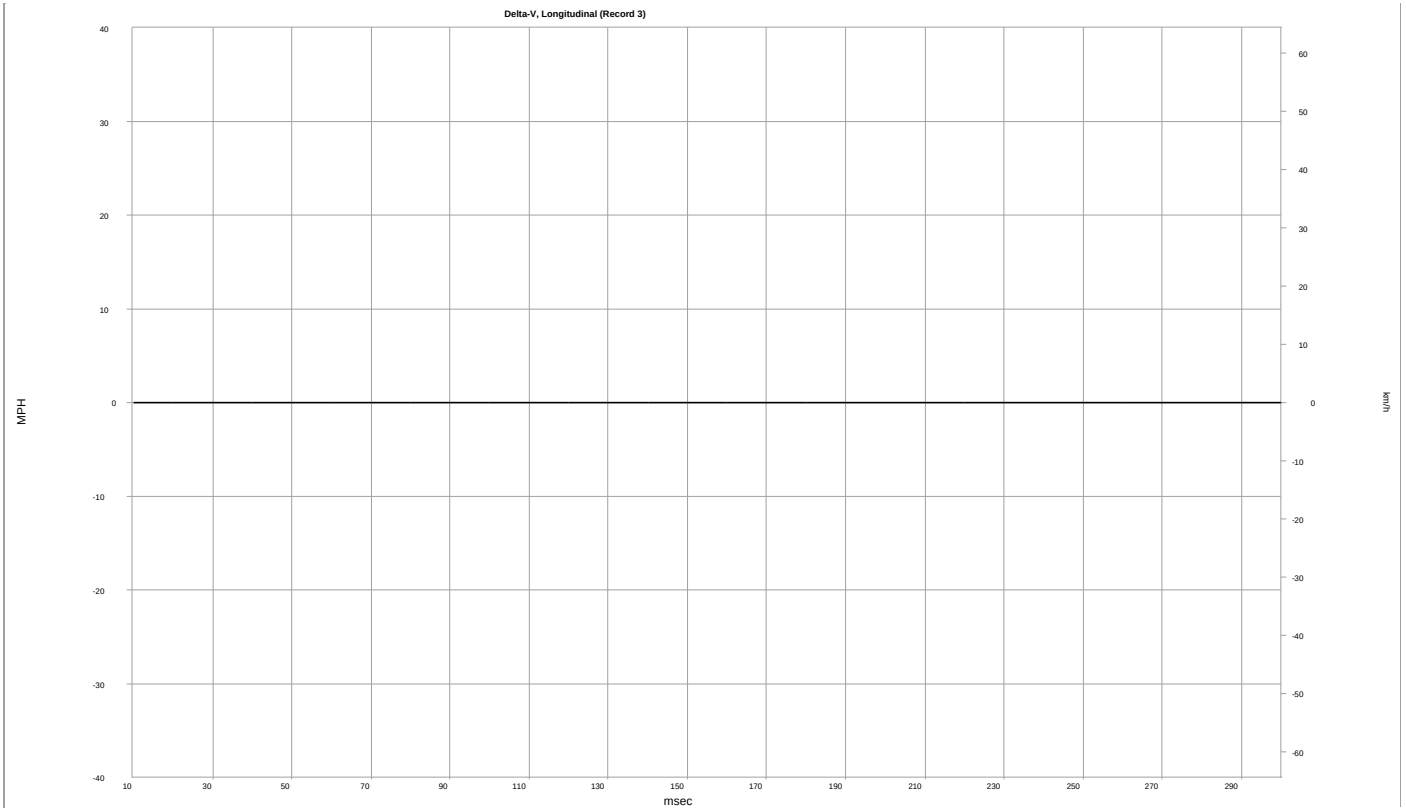
Time to Battery Disconnect Switch Side Severity (msec)	Data Not Available
Event Enable Time (T0) (msec)	842,243,096
Event End Time (Tend) (msec)	842,248,031
Complete File Recorded (Event Recording Progress and Complete Flag)	Event Recording Complete

Diagnostic Trouble Codes 0.5 Seconds Prior to Time Zero (Record 3)

DTC 1	N/A, N/A
DTC 2	N/A, N/A
DTC 3	N/A, N/A
DTC 4	N/A, N/A
DTC 5	N/A, N/A
DTC 6	N/A, N/A
DTC 7	N/A, N/A
DTC 8	N/A, N/A
DTC 9	N/A, N/A

Deployment Command Data (Record 3)

Driver 1st Stage Deployment Loop Commanded (msec)	Data Not Available
Passenger 1st Stage Deployment Loop Commanded (msec)	Data Not Available
Driver 2nd Stage Deployment Loop Commanded (msec)	Data Not Available
Passenger 2nd Stage Deployment Loop Commanded (msec)	Data Not Available
Driver Pretensioner Deployment Loop #1 Commanded (msec)	Data Not Available
Passenger Pretensioner Deployment Loop #1 Commanded (msec)	Data Not Available
Driver Pretensioner Deployment Loop #2 Commanded (msec)	Data Not Available
Passenger Pretensioner Deployment Loop #2 Commanded (msec)	Data Not Available
Driver Thorax Loop Commanded (msec)	Data Not Available
Passenger Thorax Loop Commanded Passenger (msec)	Data Not Available
Left Front Roof Rail/Head Curtain Loop Commanded (msec)	Data Not Available
Right Front Roof Rail/Head Curtain Loop Commanded (msec)	Data Not Available
Driver Center Inboard Loop Commanded (msec)	Data Not Available

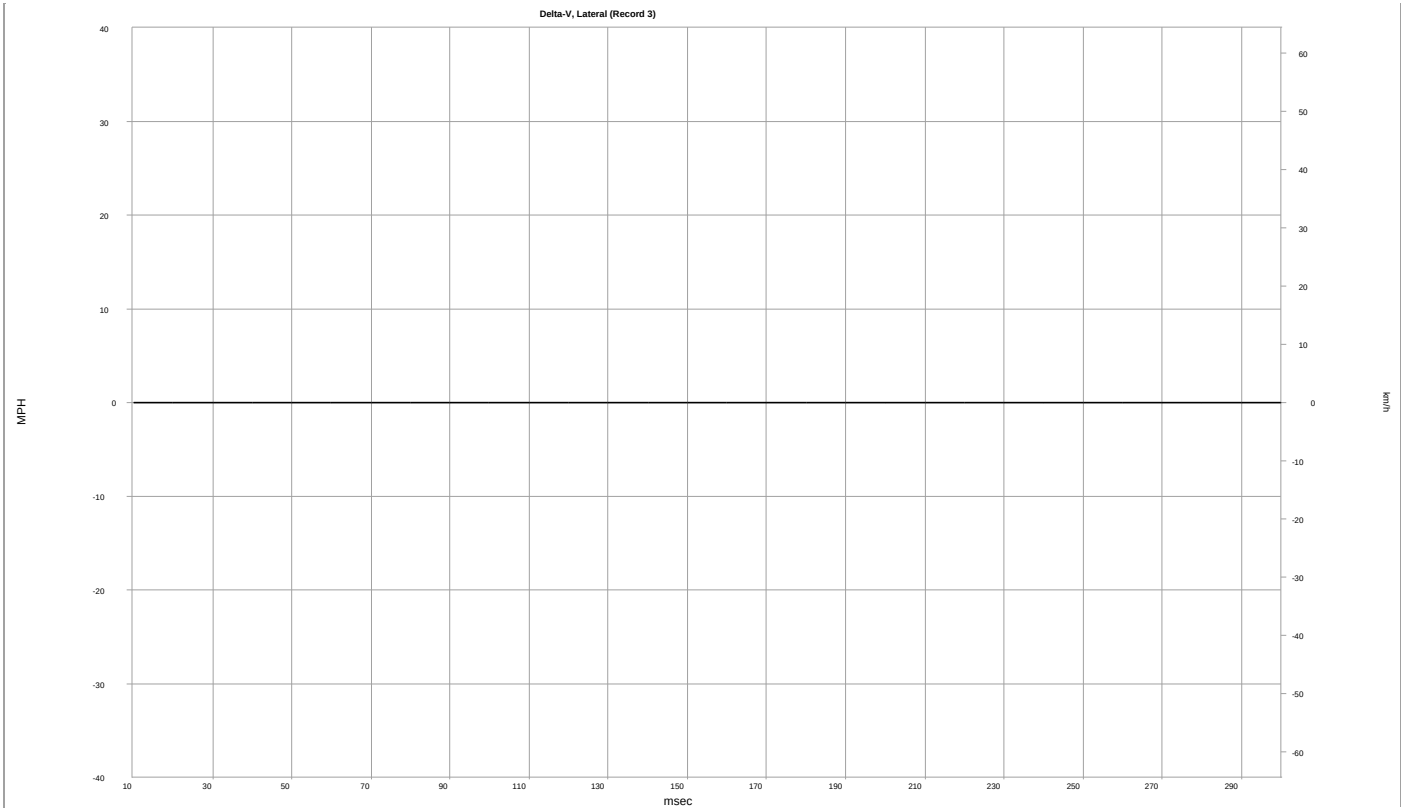


Longitudinal Delta-V (Record 3)

Time (msec)	Delta-V, Longitudinal (SDM Recorded Vehicle Longitudinal Velocity Change for FSR Event) (MPH [km/h])
10	0 [0]
20	0 [0]
30	0 [0]
40	0 [0]
50	0 [0]
60	0 [0]
70	0 [0]
80	0 [0]
90	0 [0]
100	0 [0]
110	0 [0]
120	0 [0]
130	0 [0]
140	0 [0]
150	0 [0]
160	0 [0]
170	0 [0]
180	0 [0]
190	0 [0]
200	0 [0]
210	0 [0]
220	0 [0]
230	0 [0]
240	0 [0]
250	0 [0]
260	0 [0]
270	0 [0]
280	0 [0]
290	0 [0]
300	0 [0]

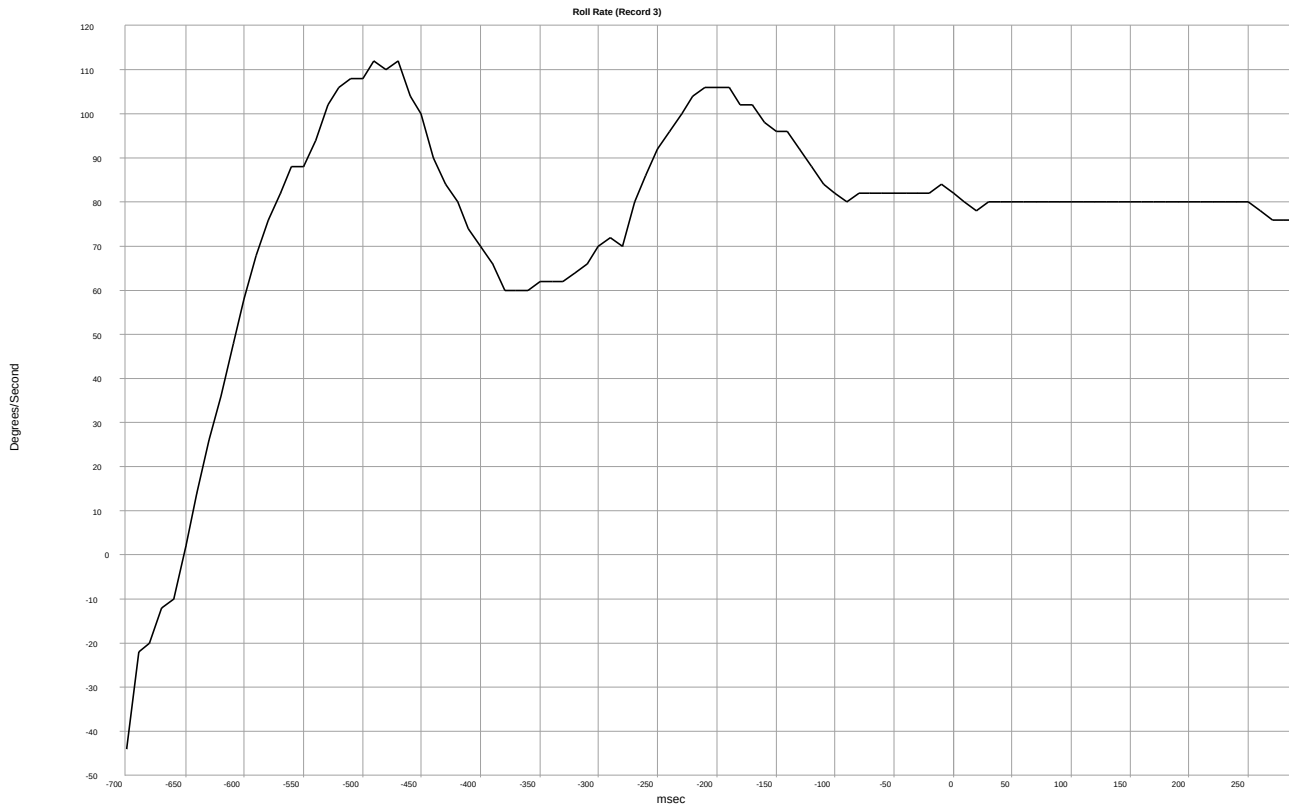
Acceleration, Longitudinal (Record 3)

Contains No Recorded Data



Lateral Delta-V (Record 3)

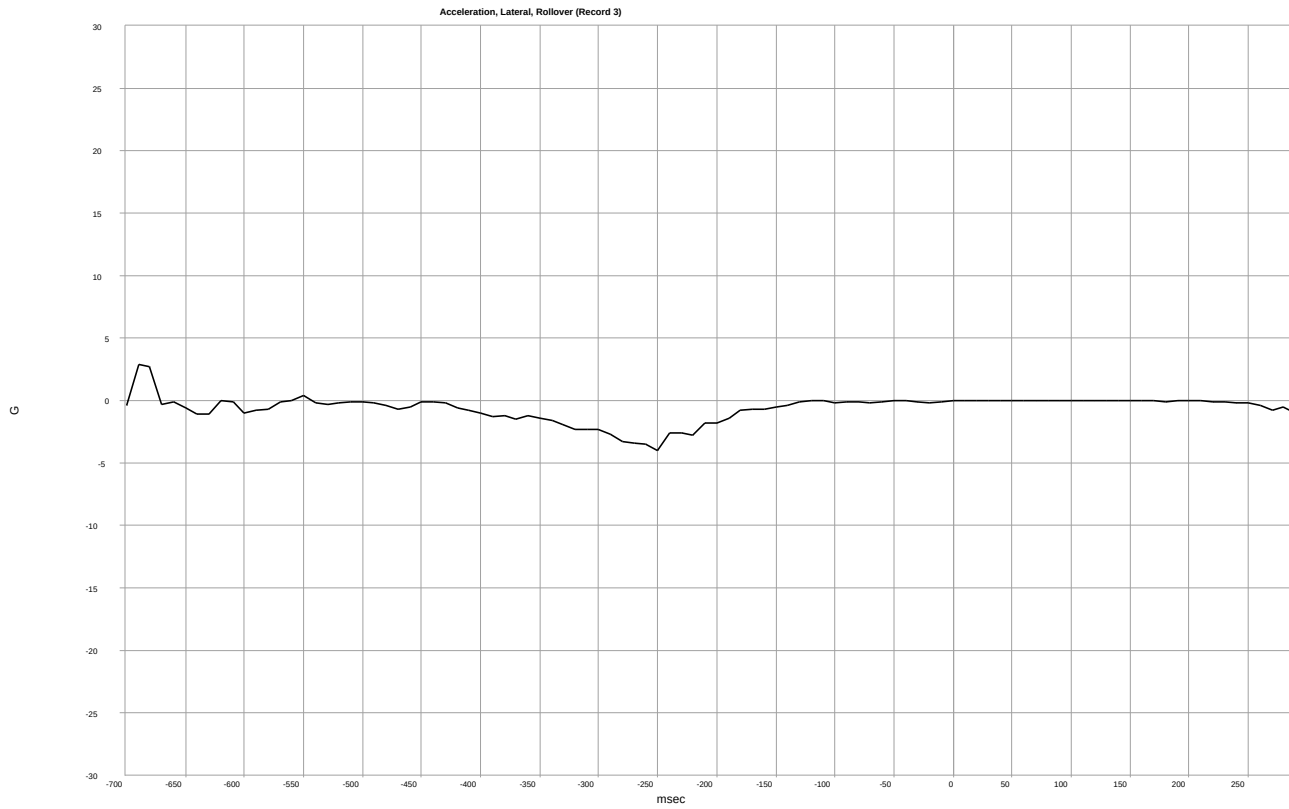
Time (msec)	Delta-V, Lateral (SDM Recorded Vehicle Lateral Velocity Change for FSR Event) (MPH [km/h])
10	0 [0]
20	0 [0]
30	0 [0]
40	0 [0]
50	0 [0]
60	0 [0]
70	0 [0]
80	0 [0]
90	0 [0]
100	0 [0]
110	0 [0]
120	0 [0]
130	0 [0]
140	0 [0]
150	0 [0]
160	0 [0]
170	0 [0]
180	0 [0]
190	0 [0]
200	0 [0]
210	0 [0]
220	0 [0]
230	0 [0]
240	0 [0]
250	0 [0]
260	0 [0]
270	0 [0]
280	0 [0]
290	0 [0]
300	0 [0]



Rollover Crash Pulse (Record 3)

Time (msec)	SDM Recorded Vehicle Roll Rate (deg/sec)
-700	-44
-690	-22
-680	-20
-670	-12
-660	-10
-650	2
-640	14
-630	26
-620	36
-610	48
-600	58
-590	68
-580	76
-570	82
-560	88
-550	88
-540	94
-530	102
-520	106
-510	108
-500	108
-490	112
-480	110
-470	112
-460	104
-450	100
-440	90
-430	84
-420	80
-410	74
-400	70
-390	66
-380	60
-370	60
-360	60
-350	62
-340	62
-330	62
-320	64
-310	66
-300	70
-290	72
-280	70
-270	80
-260	86
-250	92
-240	96
-230	100
-220	104
-210	106
-200	106
-190	106
-180	102
-170	102
-160	98
-150	96
-140	96
-130	92
-120	88

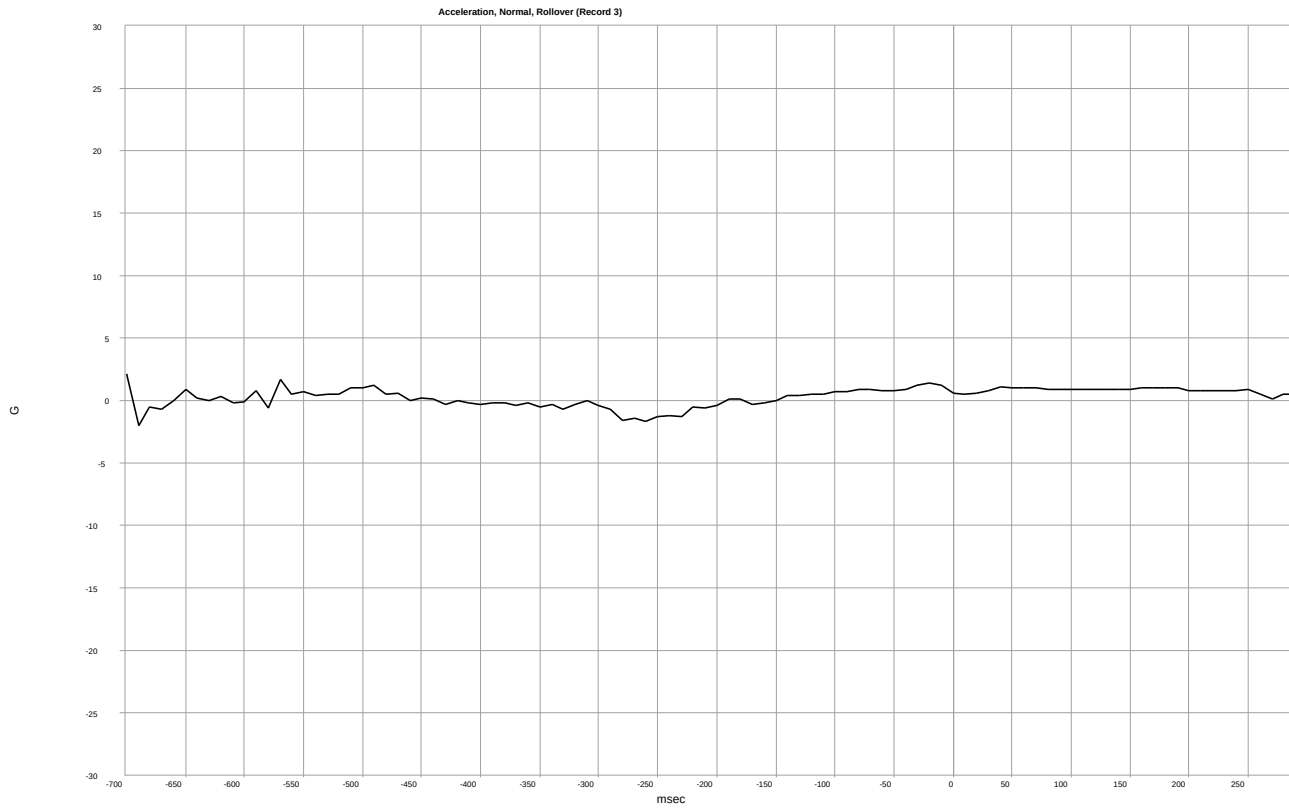
Time (msec)	SDM Recorded Vehicle Roll Rate (deg/sec)
-110	84
-100	82
-90	80
-80	82
-70	82
-60	82
-50	82
-40	82
-30	82
-20	82
-10	84
0	82
10	80
20	78
30	80
40	80
50	80
60	80
70	80
80	80
90	80
100	80
110	80
120	80
130	80
140	80
150	80
160	80
170	80
180	80
190	80
200	80
210	80
220	80
230	80
240	80
250	80
260	78
270	76
280	76
290	76



Acceleration, Lateral, Rollover (Record 3)

Time (msec)	Lateral Acceleration (SDM Recorded Vehicle Lateral Acceleration for Rollover Event) (g)
-700	-0.40
-690	2.90
-680	2.70
-670	-0.30
-660	-0.10
-650	-0.60
-640	-1.10
-630	-1.10
-620	0.00
-610	-0.10
-600	-1.00
-590	-0.80
-580	-0.70
-570	-0.10
-560	0.00
-550	0.40
-540	-0.20
-530	-0.30
-520	-0.20
-510	-0.10
-500	-0.10
-490	-0.20
-480	-0.40
-470	-0.70
-460	-0.50
-450	-0.10
-440	-0.10
-430	-0.20
-420	-0.60
-410	-0.80
-400	-1.00
-390	-1.30
-380	-1.20
-370	-1.50
-360	-1.20
-350	-1.40
-340	-1.60
-330	-1.90
-320	-2.30
-310	-2.30
-300	-2.30
-290	-2.70
-280	-3.30
-270	-3.40
-260	-3.50
-250	-4.00
-240	-2.60
-230	-2.60
-220	-2.80
-210	-1.80
-200	-1.80
-190	-1.40
-180	-0.80
-170	-0.70
-160	-0.70
-150	-0.50
-140	-0.40
-130	-0.10
-120	0.00

Time (msec)	Lateral Acceleration (SDM Recorded Vehicle Lateral Acceleration for Rollover Event) (g)
-110	0.00
-100	-0.20
-90	-0.10
-80	-0.10
-70	-0.20
-60	-0.10
-50	0.00
-40	0.00
-30	-0.10
-20	-0.20
-10	-0.10
0	0.00
10	0.00
20	0.00
30	0.00
40	0.00
50	0.00
60	0.00
70	0.00
80	0.00
90	0.00
100	0.00
110	0.00
120	0.00
130	0.00
140	0.00
150	0.00
160	0.00
170	0.00
180	-0.10
190	0.00
200	0.00
210	0.00
220	-0.10
230	-0.10
240	-0.20
250	-0.20
260	-0.40
270	-0.80
280	-0.50
290	-1.00



Acceleration, Normal, Rollover (Record 3)

Time (msec)	Normal Acceleration (SDM Recorded Vehicle Vertical Acceleration for Rollover Event (g)
-700	2.10
-690	-2.00
-680	-0.50
-670	-0.70
-660	0.00
-650	0.90
-640	0.20
-630	0.00
-620	0.30
-610	-0.20
-600	-0.10
-590	0.80
-580	-0.60
-570	1.70
-560	0.50
-550	0.70
-540	0.40
-530	0.50
-520	0.50
-510	1.00
-500	1.00
-490	1.20
-480	0.50
-470	0.60
-460	0.00
-450	0.20
-440	0.10
-430	-0.30
-420	0.00
-410	-0.20
-400	-0.30
-390	-0.20
-380	-0.20
-370	-0.40
-360	-0.20
-350	-0.50
-340	-0.30
-330	-0.70
-320	-0.30
-310	0.00
-300	-0.40
-290	-0.70
-280	-1.60
-270	-1.40
-260	-1.70
-250	-1.30
-240	-1.20
-230	-1.30
-220	-0.50
-210	-0.60
-200	-0.40
-190	0.10
-180	0.10
-170	-0.30
-160	-0.20
-150	0.00
-140	0.40
-130	0.40
-120	0.50

Time (msec)	Normal Acceleration (SDM Recorded Vehicle Vertical Acceleration for Rollover Event (g)
-110	0.50
-100	0.70
-90	0.70
-80	0.90
-70	0.90
-60	0.80
-50	0.80
-40	0.90
-30	1.20
-20	1.40
-10	1.20
0	0.60
10	0.50
20	0.60
30	0.80
40	1.10
50	1.00
60	1.00
70	1.00
80	0.90
90	0.90
100	0.90
110	0.90
120	0.90
130	0.90
140	0.90
150	0.90
160	1.00
170	1.00
180	1.00
190	1.00
200	0.80
210	0.80
220	0.80
230	0.80
240	0.80
250	0.90
260	0.50
270	0.10
280	0.50
290	0.50

Pre-Crash Data -8.0 to 0.0 sec (Record 3) - Table 1 of 7

Time (sec)	Accelerator Pedal, % Full (%)	ABS Activity	Brake Pedal Position (%)	Driver Applied Brake Pedal Pressure (kPa)	Driver Applied Brake Pedal Pressure Detected	Service Brake, On/Off (Brake Pedal Initial Travel Achieved)	Cruise and Speed Limiter Switch Status
-8.0	0	Off	16	162	True	On (True)	No Activation
-7.5	0	Off	12	81	True	On (True)	No Activation
-7.0	0	Off	8	81	False	On (True)	No Activation
-6.5	0	Off	0	0	False	Off (False)	No Activation
-6.0	0	Off	14	567	True	On (True)	No Activation
-5.5	0	Off	29	891	True	On (True)	No Activation
-5.0	0	Off	29	810	True	On (True)	No Activation
-4.5	0	Off	22	486	True	On (True)	No Activation
-4.0	14	Off	0	0	False	Off (False)	No Activation
-3.5	14	Off	0	0	False	Off (False)	No Activation
-3.0	18	Off	0	0	False	Off (False)	No Activation
-2.5	18	Off	0	0	False	Off (False)	No Activation
-2.0	36	Off	0	0	False	Off (False)	No Activation
-1.5	99	Off	0	0	False	Off (False)	No Activation
-1.0	99	Off	0	0	False	Off (False)	No Activation
-0.5	99	Off	0	0	False	Off (False)	No Activation
0.0	99	Off	0	0	False	Off (False)	No Activation

Pre-Crash Data -8.0 to 0.0 sec (Record 3) - Table 2 of 7

Time (sec)	Cruise Secondary Switch Status	Conventional Cruise Control	Adaptive Cruise Control Selected Mode	Adaptive Cruise Control	Transmission Estimated Gear	Transmission Shift Lever Position	Reduced Engine Power Mode Indicator On
-8.0	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-7.5	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-7.0	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-6.5	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-6.0	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-5.5	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-5.0	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-4.5	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-4.0	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-3.5	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-3.0	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-2.5	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-2.0	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-1.5	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-1.0	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
-0.5	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off
0.0	No Activation	Inactive	Enhanced Cruise Control	Inactive	First	Forward Range	Off

Pre-Crash Data -8.0 to 0.0 sec (Record 3) - Table 3 of 7

Time (sec)	Engine RPM (Engine Speed)	Engine Torque (Nm [Ft Lbs])	Engine Throttle, % Full (%)	Speed, Vehicle Indicated (MPH [km/h])	IMU Yaw Rate (deg/sec)	Right Front Wheel Angular Speed (RPM)	Left Front Wheel Angular Speed (RPM)
-8.0	571	46.0 [33.9]	5	1 [2]	0.288	12	12
-7.5	588	43.0 [31.7]	6	0 [0]	-0.216	0	0
-7.0	561	42.5 [31.3]	6	0 [0]	-0.120	0	0
-6.5	561	42.5 [31.3]	5	0 [0]	-0.144	0	0
-6.0	566	40.0 [29.5]	5	0 [0]	-0.144	0	0
-5.5	567	38.5 [28.4]	5	0 [0]	-0.192	0	0
-5.0	574	38.0 [28.0]	5	0 [0]	-0.120	0	0
-4.5	568	36.5 [26.9]	5	0 [0]	-0.144	0	0
-4.0	593	79.0 [58.3]	5	0 [0]	-0.120	0	0
-3.5	1,210	167.0 [123.2]	18	0 [0]	-0.144	0	0
-3.0	1,411	162.0 [119.5]	22	1 [2]	0.384	18	17
-2.5	1,621	197.0 [145.3]	27	3 [5]	4.104	39	37
-2.0	1,642	193.5 [142.7]	27	5 [8]	11.760	64	55
-1.5	2,638	535.5 [395.0]	74	9 [14]	5.520	98	94
-1.0	2,940	559.0 [412.3]	99	14 [22]	-1.680	160	160
-0.5	3,603	562.5 [414.9]	99	19 [31]	-15.384	217	219
0.0	3,963	571.0 [421.1]	99	22 [36]	-16.056	234	224

Pre-Crash Data -8.0 to 0.0 sec (Record 3) - Table 4 of 7

Time (sec)	Right Rear Wheel Angular Speed (RPM)	Left Rear Wheel Angular Speed (RPM)	Steering Wheel Angle (deg)	Propulsion System Active	System Power Mode	Backup System Power Mode	SDM Power Mode
-8.0	12	13	25	True	Propulsion	Propulsion	Propulsion
-7.5	0	0	25	True	Propulsion	Propulsion	Propulsion
-7.0	0	0	27	True	Propulsion	Propulsion	Propulsion
-6.5	0	0	28	True	Propulsion	Propulsion	Propulsion
-6.0	0	0	28	True	Propulsion	Propulsion	Propulsion
-5.5	0	0	28	True	Propulsion	Propulsion	Propulsion
-5.0	0	0	27	True	Propulsion	Propulsion	Propulsion
-4.5	0	0	27	True	Propulsion	Propulsion	Propulsion
-4.0	0	0	27	True	Propulsion	Propulsion	Propulsion
-3.5	0	0	27	True	Propulsion	Propulsion	Propulsion
-3.0	18	18	60	True	Propulsion	Propulsion	Propulsion
-2.5	38	37	174	True	Propulsion	Propulsion	Propulsion
-2.0	62	59	258	True	Propulsion	Propulsion	Propulsion
-1.5	97	93	92	True	Propulsion	Propulsion	Propulsion
-1.0	159	159	-25	True	Propulsion	Propulsion	Propulsion
-0.5	212	217	-134	True	Propulsion	Propulsion	Propulsion
0.0	235	232	-137	True	Propulsion	Propulsion	Propulsion

Pre-Crash Data -8.0 to 0.0 sec (Record 3) - Table 5 of 7

Time (sec)	Ignition Status	Ignition Prolongation Timer (sec)	Secondary Collision Prolongation Timer (sec)	Antilock Brake System Failed	Brake Pedal Override Flag	Automatic Brake Status	Electronic Stability Control Status
-8.0	On	5.0	0.0	False	False	Not Active	Normal Operation
-7.5	On	5.0	0.0	False	False	Not Active	Normal Operation
-7.0	On	5.0	0.0	False	False	Not Active	Normal Operation
-6.5	On	5.0	0.0	False	False	Not Active	Normal Operation
-6.0	On	5.0	0.0	False	False	Not Active	Normal Operation
-5.5	On	5.0	0.0	False	False	Not Active	Normal Operation
-5.0	On	5.0	0.0	False	False	Not Active	Normal Operation
-4.5	On	5.0	0.0	False	False	Not Active	Normal Operation
-4.0	On	5.0	0.0	False	False	Not Active	Normal Operation
-3.5	On	5.0	0.0	False	False	Not Active	Normal Operation
-3.0	On	5.0	0.0	False	False	Not Active	Normal Operation
-2.5	On	5.0	0.0	False	False	Not Active	Normal Operation
-2.0	On	5.0	0.0	False	False	Not Active	Normal Operation
-1.5	On	5.0	0.0	False	False	Not Active	Normal Operation
-1.0	On	5.0	0.0	False	False	Not Active	Normal Operation
-0.5	On	5.0	0.0	False	False	Not Active	Normal Operation
0.0	On	5.0	0.0	False	False	Not Active	Normal Operation

Pre-Crash Data -8.0 to 0.0 sec (Record 3) - Table 6 of 7

Time (sec)	Traction Control System Present	Traction Control System Failed	Traction Control System Enabled	Traction Control System Active	Traction Control System Switch Status	Left Turn Signal Switch Active	Right Turn Signal Switch Active
-8.0	True	False	True	Traction Control Off	Enabled	False	False
-7.5	True	False	True	Traction Control Off	Enabled	False	False
-7.0	True	False	True	Traction Control Off	Enabled	False	False
-6.5	True	False	True	Traction Control Off	Enabled	False	False
-6.0	True	False	True	Traction Control Off	Enabled	False	False
-5.5	True	False	True	Traction Control Off	Enabled	False	False
-5.0	True	False	True	Traction Control Off	Enabled	False	False
-4.5	True	False	True	Traction Control Off	Enabled	False	False
-4.0	True	False	True	Traction Control Off	Enabled	False	False
-3.5	True	False	True	Traction Control Off	Enabled	False	False
-3.0	True	False	True	Traction Control Off	Enabled	False	False
-2.5	True	False	True	Traction Control Off	Enabled	False	False
-2.0	True	False	True	Traction Control Off	Enabled	False	False
-1.5	True	False	True	Traction Control Off	Enabled	False	False
-1.0	True	False	True	Traction Control Off	Enabled	False	False
-0.5	True	False	True	Traction Control Off	Enabled	False	False
0.0	True	False	True	Traction Control Off	Enabled	False	False

Pre-Crash Data -8.0 to 0.0 sec (Record 3) - Table 7 of 7

Time (sec)	IMU Lateral Acceleration (g)	IMU Longitudinal Acceleration (g)	Red Brake Telltale On	Brake Boost Status - Eboost
-8.0	-0.044530	-0.076372	False	Normal Boost
-7.5	-0.031842	0.050874	False	Normal Boost
-7.0	-0.025376	0.050874	False	Normal Boost
-6.5	-0.025376	0.050874	False	Normal Boost
-6.0	-0.025376	0.044530	False	Normal Boost
-5.5	-0.025376	0.057218	False	Normal Boost
-5.0	-0.025376	0.050874	False	Normal Boost
-4.5	-0.025376	0.044530	False	Normal Boost
-4.0	-0.031842	0.050874	False	Normal Boost
-3.5	-0.025376	0.152866	False	Normal Boost
-3.0	-0.006344	0.184708	False	Normal Boost
-2.5	0.019032	0.248392	False	Normal Boost
-2.0	0.057218	0.235704	False	Normal Boost
-1.5	-0.006344	0.560590	False	Normal Boost
-1.0	-0.152866	0.528748	False	Normal Boost
-0.5	-0.401258	0.401258	False	Normal Boost
0.0	-0.178364	0.439566	False	Normal Boost

2023 (GM) Cadillac Escalade

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	1GYS4PKL0PR*****
User	
Case Number	
EDR Data Imaging Date	
Crash Date	
Filename	20231059126_V1.CDRX
Saved on	Tuesday, October 17 2023 at 13:27:47
Imaged with CDR version	Crash Data Retrieval Tool 23.2.1
Imaged with Software Licensed to (Company Name)	NHTSA
Reported with CDR version	Crash Data Retrieval Tool 23.3
Reported with Software Licensed to (Company Name)	NHTSA
EDR Device Type	Active Safety Control Module
Event(s) recovered	Record 1 - SIR Event Non-Frontal Deployment, Record 2 - FPB Alert Event, Record 3 - FPB Alert Event

Comments

No comments entered.

Data Limitations

Recorded Crash Events:

This Active Safety Control Module (ASCM) can record up to three events. Event recording is triggered by an "event of interest". The following are possible "events of interest" that trigger event recording and are listed in the priority ordered from highest to lowest:

- SIR Event - Deployment Event (both Frontal and Non-Frontal)
- SIR Event - Non-Deployment
- FPB Braking Event
- AEB Braking Event
- FPB Alert Event
- FCA Event

If all three event records are full, a new event can be stored if it is of a higher or equal priority than the currently recorded events. The new event would overwrite the lowest priority event but if all recorded events are of the same priority as the new event, the oldest event would be overwritten. SIR Event - Deployment Event (both Frontal and Non-Frontal types) cannot be overwritten.

Data:

Some Event Data parameters are recorded every 100 milliseconds for 80 samples.

For SIR Event - Deployment Event (both Frontal and Non-Frontal), the system will record 7.9 seconds prior to receiving the serial data notification from the SDM.

For all other event types, the system will record 4.9 seconds prior to the event trigger and 3.0 seconds after the event trigger.

Some Event Data (500ms) parameters are recorded every 500 milliseconds for 16 samples

For SIR Event - Deployment Event (both Frontal and Non-Frontal), the system will record 7.5 seconds prior to the receiving the serial data notification from the SDM.

For all other event types, the system will record 4.5 seconds prior to the event trigger and 3.0 seconds after the event trigger.

-Pre-event data is recorded asynchronously. For Event Data sampled at 100 ms, the -0.1 second Pre-event data value (most recent recorded data point) is the data point last sampled before Time Zero. That is to say, the last data point may have been captured just before Time Zero but no more than 0.1 second before Time Zero. All subsequent Pre-event data values are referenced from this data point. This is similarly true for Event Data sampled at 500 ms, except the -0.5 second Pre-event data value may have been captured any time up to 0.5 seconds before Time Zero.

-When storing a SIR Event - Deployment Event (both Frontal and Non-Frontal), the ASCM requires about 2 seconds of power, after receiving the serial data notification from the SDM, to write the event record, or the event may not be stored. For all other events, the ASCM will store the event data at vehicle off and power down.

-All data should be examined in conjunction with other available physical evidence from the vehicle and scene.

-ASCM Event Count is a counter of triggered events within the ASCM module. This counter goes from 1 to 255 and will then roll over to 1.

- A SIR Event - Non-Deployment is one where the SDM Automatic Crash Notification or EDR Trigger Thresholds have been met.

Data Element Sign Convention:

The following table provides an explanation of the sign notation for data elements that may be included in this CDR report. Directional references to sign notation are all 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
Vehicle Speed	Forward
Maximum Requested Acceleration	Forward
Vehicle Speed Average Non-Driven	Forward
Steering Wheel Angle	Clockwise Rotation
Steering Wheel Angle Gradient	Clockwise Rotation
ASCM Yaw Rate	Counter-clockwise Rotation
ASCM Lateral Acceleration	Left to Right
ASCM Longitudinal Acceleration	Forward
AEB Object Longitudinal Distance	Forward
AEB Object Relative Longitudinal Velocity	Forward
AEB Object Relative Longitudinal Acceleration	Forward
AEB Object Lateral Distance	Left
AEB Object Lateral Velocity	Left to Right
AEB Braking Requested Acceleration	Forward
FPB Braking Requested Acceleration	Forward
FPB Pedestrian Longitudinal Distance	Forward
FPB Pedestrian Longitudinal Velocity	Forward
FPB Pedestrian Longitudinal Acceleration	Forward
FPB Pedestrian Lateral Distance	Left
FPB Pedestrian Lateral Velocity	Left to Right
Left Lane Marking Lateral Offset	Left
Right Lane Marking Lateral Offset	Left
ACC Braking Requested Acceleration	Forward

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 tool.

01082_23_EOCM3_HC_r003

System Status at Retrieval

Manufacturing Traceability - Line Identification	3
Manufacturing Traceability - Shift Identification	1
Manufacturing Traceability - Last Two Digits of Year	23
Manufacturing Traceability - Julian Date Day of the Year	040
Manufacturing Traceability - Serial, Lot or Batch Number	P6N29005E
Boot Loader Part Number	84506762
Operational Software Part Number	85622859
Vehicle System Part Number	85625124
Lane Departure Part Number	85625125
Brake Calibration Part Number	85625143
ACC Calibration Part Number	86509136
Manufacturing Calibration Part Number	85625158
Ethernet Switch Part Number	85625163
Vehicle Dynamics Calibration Part Number	85625164
Vehicle Config Calibration Part Number	85625168
Vehicle Identification Number (VIN)	1GYS4PKL0PR
GM End Model Part Number	84960563
GM Base Model Part Number	84835761

System Status at Event (Record 1 - SIR Event Non-Frontal Deployment)

UTC Date at Event	
UTC Time at Event	
GPS Latitudinal Position (degrees)	
GPS Longitudinal Position (degrees)	
Odometer (miles)	8591
SDM Event Counter	3
ASCM Event Counter	40
ASCM Event Trigger Type	SIR Event Non-Frontal Deployment
Vehicle Speed (MPH)	23
Maximum Requested Acceleration (m/s^2)	0.00
Duration of Maximum Acceleration Request (Seconds)	0
FCA Gap Customer Setting	Far
LKA Customer Setting	Off
AEB Customer Setting	Alert and Brake
FPB Customer Setting	Alert and Brake
ACC Type Customer Setting	Enhanced Cruise Control
Lane Change on Demand Customer Setting	Lane Change on Demand and Automatic Lane Change
Data Write Complete	Write Complete

Event Data (Record 1 - SIR Event Non-Frontal Deployment) - Table 1 of 12

Time (sec)	Vehicle Speed Average Non-Driven (MPH)	Accelerator Pedal, % Full (%)	Steering Wheel Angle (deg)	Steering Wheel Angle Gradient (deg/sec)	Brake Pedal Capacity (%)
-7.9	0	0.00	25.993	12.000	21
-7.8	0	0.00	27.167	2.000	21
-7.7	0	0.00	27.303	0.000	18
-7.6	0	0.00	27.303	0.000	9
-7.5	0	0.00	27.235	2.000	13
-7.4	0	0.00	27.619	2.000	2
-7.3	0	0.00	27.732	0.000	0
-7.2	0	0.00	27.619	2.000	0
-7.1	0	0.00	27.619	12.000	0
-7.0	0	0.00	28.545	4.000	0
-6.9	0	0.00	28.613	2.000	0
-6.8	0	0.00	28.613	0.000	0
-6.7	0	0.00	28.613	-10.000	0
-6.6	0	0.00	28.296	-4.000	2
-6.5	0	0.00	28.229	0.000	25
-6.4	0	0.00	28.229	-6.000	37
-6.3	0	0.00	28.116	0.000	50
-6.2	0	0.00	28.048	0.000	56
-6.1	0	0.00	28.048	2.000	56
-6.0	0	0.00	27.980	-10.000	55
-5.9	0	0.00	27.416	-4.000	56
-5.8	0	0.00	27.122	-2.000	56
-5.7	0	0.00	27.054	0.000	56
-5.6	0	0.00	27.054	2.000	56
-5.5	0	0.00	27.054	0.000	55
-5.4	0	0.00	27.054	0.000	55
-5.3	0	0.00	27.054	0.000	52
-5.2	0	0.00	27.054	0.000	52
-5.1	0	0.00	27.054	2.000	50
-5.0	0	0.00	27.054	0.000	35
-4.9	0	0.00	27.054	0.000	1
-4.8	0	0.00	27.054	0.000	0
-4.7	0	0.00	27.054	0.000	0
-4.6	0	14.51	27.054	2.000	0
-4.5	0	14.51	27.054	2.000	0
-4.4	0	15.29	27.054	2.000	0
-4.3	0	14.90	26.987	0.000	0
-4.2	0	14.90	27.054	0.000	0
-4.1	0	14.90	27.054	0.000	0
-4.0	0	14.90	27.054	2.000	0
-3.9	1	14.90	27.122	32.000	0
-3.8	1	14.90	31.932	86.000	0
-3.7	1	14.90	40.672	96.000	0
-3.6	2	16.86	50.925	136.000	0
-3.5	2	18.04	65.107	160.000	0
-3.4	2	18.82	82.496	202.000	0
-3.3	3	18.82	103.046	232.000	0
-3.2	3	18.82	127.617	268.000	0
-3.1	3	18.82	155.552	278.000	0
-3.0	4	18.82	182.629	268.000	0
-2.9	5	18.43	209.932	264.000	0
-2.8	5	16.47	234.366	212.000	0
-2.7	5	16.08	254.239	152.000	0
-2.6	5	17.25	264.944	-60.000	0
-2.5	6	55.29	248.865	-424.000	0
-2.4	6	99.61	200.989	-532.000	0
-2.3	7	99.61	152.797	-358.000	0
-2.2	9	99.61	121.497	-210.000	0
-2.1	9	99.61	102.053	-146.000	0

Time (sec)	Vehicle Speed Average Non-Driven (MPH)	Accelerator Pedal, % Full (%)	Steering Wheel Angle (deg)	Steering Wheel Angle Gradient (deg/sec)	Brake Pedal Capacity (%)
-2.0	9	99.61	86.177	-204.000	0
-1.9	11	99.61	67.230	-232.000	0
-1.8	12	99.61	34.868	-306.000	0
-1.7	13	99.61	15.673	-64.000	0
-1.6	14	99.61	2.484	-352.000	0
-1.5	15	99.61	-38.052	-260.000	0
-1.4	17	99.61	-58.490	-166.000	0
-1.3	18	99.61	-74.863	-106.000	0
-1.2	18	99.61	-84.483	-174.000	0
-1.1	20	99.61	-110.679	-376.000	0
-1.0	21	99.61	-142.183	-54.000	0
-0.9	23	99.61	-138.434	174.000	0
-0.8	23	99.61	-124.545	210.000	4
-0.7	23	0.00	-62.871	278.000	5
-0.6	23	0.00	-67.546	-110.000	5
-0.5	23	0.00	-68.607	116.000	5
-0.4	23	0.00	-54.741	16.000	5
-0.3	23	0.00	-45.053	354.000	5
-0.2	23	0.00	3.433	460.000	5
-0.1	23	0.00	36.562	366.000	5
0.0	23	0.00	47.492	136.000	5

Event Data (Record 1 - SIR Event Non-Frontal Deployment) - Table 2 of 12

Time (sec)	ASCM Yaw Rate (deg/sec)	ASCM Lateral Acceleration (m/s ²)	ASCM Longitudinal Acceleration (m/s ²)	SDM Notification Event Status	ABS Active
-7.9	-0.083	-0.25	0.75	No Event	False
-7.8	0.027	-0.25	0.50	No Event	False
-7.7	0.027	-0.25	0.25	No Event	False
-7.6	0.000	-0.25	0.25	No Event	False
-7.5	0.000	-0.25	0.50	No Event	False
-7.4	0.027	-0.25	0.25	No Event	False
-7.3	0.000	-0.25	0.25	No Event	False
-7.2	0.000	-0.25	0.25	No Event	False
-7.1	0.027	-0.25	0.25	No Event	False
-7.0	0.000	-0.25	0.25	No Event	False
-6.9	0.000	-0.25	0.25	No Event	False
-6.8	0.000	-0.25	0.25	No Event	False
-6.7	0.027	-0.25	0.25	No Event	False
-6.6	0.000	-0.25	0.25	No Event	False
-6.5	0.000	-0.25	0.25	No Event	False
-6.4	0.000	-0.25	0.25	No Event	False
-6.3	0.000	-0.25	0.25	No Event	False
-6.2	0.000	-0.25	0.25	No Event	False
-6.1	0.000	-0.25	0.25	No Event	False
-6.0	0.000	-0.25	0.25	No Event	False
-5.9	0.000	-0.25	0.25	No Event	False
-5.8	0.000	-0.25	0.25	No Event	False
-5.7	0.000	-0.25	0.25	No Event	False
-5.6	0.000	-0.25	0.25	No Event	False
-5.5	0.000	-0.25	0.25	No Event	False
-5.4	0.000	-0.25	0.25	No Event	False
-5.3	0.000	-0.25	0.25	No Event	False
-5.2	0.000	-0.25	0.25	No Event	False
-5.1	0.000	-0.25	0.25	No Event	False
-5.0	0.000	-0.25	0.25	No Event	False
-4.9	0.000	-0.25	0.25	No Event	False
-4.8	0.000	-0.25	0.25	No Event	False
-4.7	0.000	-0.25	0.25	No Event	False
-4.6	0.000	-0.25	0.25	No Event	False
-4.5	0.000	-0.25	0.25	No Event	False
-4.4	0.000	-0.25	0.25	No Event	False
-4.3	0.000	-0.25	0.25	No Event	False
-4.2	0.000	-0.25	0.50	No Event	False
-4.1	0.000	-0.25	0.75	No Event	False
-4.0	0.027	-0.25	1.00	No Event	False
-3.9	0.027	-0.25	1.25	No Event	False
-3.8	0.083	-0.25	1.50	No Event	False
-3.7	0.140	-0.25	1.50	No Event	False
-3.6	0.313	-0.25	1.50	No Event	False
-3.5	0.483	-0.25	1.50	No Event	False
-3.4	0.909	-0.25	1.50	No Event	False
-3.3	1.478	-0.25	1.75	No Event	False
-3.2	2.103	-0.25	2.00	No Event	False
-3.1	2.872	0.00	1.75	No Event	False
-3.0	4.066	0.00	1.75	No Event	False
-2.9	5.231	0.25	1.75	No Event	False
-2.8	6.569	0.50	2.00	No Event	False
-2.7	8.815	0.50	2.00	No Event	False
-2.6	10.891	0.25	1.50	No Event	False
-2.5	11.746	0.25	1.50	No Event	False
-2.4	11.603	0.25	1.50	No Event	False
-2.3	10.096	0.00	1.75	No Event	False
-2.2	8.049	-0.50	2.75	No Event	False
-2.1	7.051	-0.50	5.00	No Event	False

Time (sec)	ASCM Yaw Rate (deg/sec)	ASCM Lateral Acceleration (m/s^2)	ASCM Longitudinal Acceleration (m/s^2)	SDM Notification Event Status	ABS Active
-2.0	5.887	-0.25	5.00	No Event	False
-1.9	5.404	-0.50	5.25	No Event	False
-1.8	5.800	-0.25	5.50	No Event	False
-1.7	4.123	-0.75	5.25	No Event	False
-1.6	0.340	-0.25	4.75	No Event	False
-1.5	-1.195	-1.00	4.25	No Event	False
-1.4	-3.667	-1.75	4.25	No Event	False
-1.3	-7.564	-1.50	4.00	No Event	False
-1.2	-10.209	-2.25	4.00	No Event	False
-1.1	-11.690	-2.50	3.75	No Event	False
-1.0	-14.561	-3.50	3.00	No Event	False
-0.9	-16.438	-2.25	3.25	No Event	False
-0.8	21.616	-15.75	-19.75	Deployment Event	False
-0.7	90.192	-6.50	-10.25	Deployment Event	False
-0.6	96.874	2.50	-2.50	Deployment Event	True
-0.5	97.529	4.00	-0.25	Deployment Event	False
-0.4	97.586	11.75	-0.25	Deployment Event	True
-0.3	97.586	15.75	2.00	Deployment Event	False
-0.2	97.586	13.00	4.50	Deployment Event	False
-0.1	88.542	2.50	0.75	Deployment Event	False
0.0	81.744	1.25	-0.75	Deployment Event	False

Event Data (Record 1 - SIR Event Non-Frontal Deployment) - Table 3 of 12

Time (sec)	System Power Mode	AEB Operational Status	AEB Object Type	AEB Object Longitudinal Distance (m)	AEB Object Relative Longitudinal Velocity (m/s)
-7.9	Propulsion	Running	Unknown	199.68	0.00
-7.8	Propulsion	Running	Unknown	199.68	0.00
-7.7	Propulsion	Running	Unknown	199.68	0.00
-7.6	Propulsion	Running	Unknown	199.68	0.00
-7.5	Propulsion	Running	Unknown	199.68	0.00
-7.4	Propulsion	Running	Unknown	199.68	0.00
-7.3	Propulsion	Running	Unknown	199.68	0.00
-7.2	Propulsion	Running	Unknown	199.68	0.00
-7.1	Propulsion	Running	Unknown	199.68	0.00
-7.0	Propulsion	Running	Unknown	199.68	0.00
-6.9	Propulsion	Running	Unknown	199.68	0.00
-6.8	Propulsion	Running	Unknown	199.68	0.00
-6.7	Propulsion	Running	Unknown	199.68	0.00
-6.6	Propulsion	Running	Unknown	199.68	0.00
-6.5	Propulsion	Running	Unknown	199.68	0.00
-6.4	Propulsion	Running	Unknown	199.68	0.00
-6.3	Propulsion	Running	Unknown	199.68	0.00
-6.2	Propulsion	Running	Unknown	199.68	0.00
-6.1	Propulsion	Running	Unknown	199.68	0.00
-6.0	Propulsion	Running	Unknown	199.68	0.00
-5.9	Propulsion	Running	Unknown	199.68	0.00
-5.8	Propulsion	Running	Unknown	199.68	0.00
-5.7	Propulsion	Running	Unknown	199.68	0.00
-5.6	Propulsion	Running	Unknown	199.68	0.00
-5.5	Propulsion	Running	Unknown	199.68	0.00
-5.4	Propulsion	Running	Unknown	199.68	0.00
-5.3	Propulsion	Running	Unknown	199.68	0.00
-5.2	Propulsion	Running	Unknown	199.68	0.00
-5.1	Propulsion	Running	Unknown	199.68	0.00
-5.0	Propulsion	Running	Unknown	199.68	0.00
-4.9	Propulsion	Running	Unknown	199.68	0.00
-4.8	Propulsion	Running	Unknown	199.68	0.00
-4.7	Propulsion	Running	Unknown	199.68	0.00
-4.6	Propulsion	Running	Unknown	199.68	0.00
-4.5	Propulsion	Running	Unknown	199.68	0.00
-4.4	Propulsion	Running	Unknown	199.68	0.00
-4.3	Propulsion	Running	Unknown	199.68	0.00
-4.2	Propulsion	Running	Unknown	199.68	0.00
-4.1	Propulsion	Running	Unknown	199.68	0.00
-4.0	Propulsion	Running	Unknown	199.68	0.00
-3.9	Propulsion	Running	Unknown	199.68	0.00
-3.8	Propulsion	Running	Unknown	199.68	0.00
-3.7	Propulsion	Running	Unknown	199.68	0.00
-3.6	Propulsion	Running	Unknown	199.68	0.00
-3.5	Propulsion	Running	Unknown	199.68	0.00
-3.4	Propulsion	Running	Unknown	199.68	0.00
-3.3	Propulsion	Running	Unknown	199.68	0.00
-3.2	Propulsion	Running	Unknown	199.68	0.00
-3.1	Propulsion	Running	Unknown	199.68	0.00
-3.0	Propulsion	Running	Unknown	199.68	0.00
-2.9	Propulsion	Running	Unknown	199.68	0.00
-2.8	Propulsion	Running	Unknown	199.68	0.00
-2.7	Propulsion	Running	Unknown	199.68	0.00
-2.6	Propulsion	Running	Unknown	199.68	0.00
-2.5	Propulsion	Running	Unknown	199.68	0.00
-2.4	Propulsion	Running	Unknown	199.68	0.00
-2.3	Propulsion	Running	Unknown	199.68	0.00
-2.2	Propulsion	Running	Unknown	199.68	0.00
-2.1	Propulsion	Running	Unknown	199.68	0.00

Time (sec)	System Power Mode	AEB Operational Status	AEB Object Type	AEB Object Longitudinal Distance (m)	AEB Object Relative Longitudinal Velocity (m/s)
-2.0	Propulsion	Running	Unknown	199.68	0.00
-1.9	Propulsion	Running	Unknown	199.68	0.00
-1.8	Propulsion	Running	Unknown	199.68	0.00
-1.7	Propulsion	Running	Unknown	199.68	0.00
-1.6	Propulsion	Running	Unknown	199.68	0.00
-1.5	Propulsion	Running	Unknown	199.68	0.00
-1.4	Propulsion	Running	Unknown	199.68	0.00
-1.3	Propulsion	Running	Unknown	199.68	0.00
-1.2	Propulsion	Running	Unknown	199.68	0.00
-1.1	Propulsion	Running	Unknown	199.68	0.00
-1.0	Propulsion	Running	Unknown	199.68	0.00
-0.9	Propulsion	Running	Unknown	199.68	0.00
-0.8	Propulsion	Running	Unknown	199.68	0.00
-0.7	Propulsion	Running	Unknown	199.68	0.00
-0.6	Propulsion	Running	Unknown	199.68	0.00
-0.5	Propulsion	Running	Unknown	199.68	0.00
-0.4	Propulsion	Running	Unknown	199.68	0.00
-0.3	Propulsion	Running	Unknown	199.68	0.00
-0.2	Propulsion	Running	Unknown	199.68	0.00
-0.1	Propulsion	Running	Unknown	199.68	0.00
0.0	Propulsion	Running	Unknown	199.68	0.00

Event Data (Record 1 - SIR Event Non-Frontal Deployment) - Table 4 of 12

Time (sec)	AEB Object Relative Longitudinal Acceleration (m/s^2)	AEB Object Lateral Distance (m)	AEB Object Lateral Velocity (m/s)	Vehicle Ahead Indicator Request Status	Tailgate Alert Request Status
-7.9	0.00	19.93	0.00	Off	False
-7.8	0.00	19.93	0.00	Off	False
-7.7	0.00	19.93	0.00	Off	False
-7.6	0.00	19.93	0.00	Off	False
-7.5	0.00	19.93	0.00	Off	False
-7.4	0.00	19.93	0.00	Off	False
-7.3	0.00	19.93	0.00	Off	False
-7.2	0.00	19.93	0.00	Off	False
-7.1	0.00	19.93	0.00	Off	False
-7.0	0.00	19.93	0.00	Off	False
-6.9	0.00	19.93	0.00	Off	False
-6.8	0.00	19.93	0.00	Off	False
-6.7	0.00	19.93	0.00	Off	False
-6.6	0.00	19.93	0.00	Off	False
-6.5	0.00	19.93	0.00	Off	False
-6.4	0.00	19.93	0.00	Off	False
-6.3	0.00	19.93	0.00	Off	False
-6.2	0.00	19.93	0.00	Off	False
-6.1	0.00	19.93	0.00	Off	False
-6.0	0.00	19.93	0.00	Off	False
-5.9	0.00	19.93	0.00	Off	False
-5.8	0.00	19.93	0.00	Off	False
-5.7	0.00	19.93	0.00	Off	False
-5.6	0.00	19.93	0.00	Off	False
-5.5	0.00	19.93	0.00	Off	False
-5.4	0.00	19.93	0.00	Off	False
-5.3	0.00	19.93	0.00	Off	False
-5.2	0.00	19.93	0.00	Off	False
-5.1	0.00	19.93	0.00	Off	False
-5.0	0.00	19.93	0.00	Off	False
-4.9	0.00	19.93	0.00	Off	False
-4.8	0.00	19.93	0.00	Off	False
-4.7	0.00	19.93	0.00	Off	False
-4.6	0.00	19.93	0.00	Off	False
-4.5	0.00	19.93	0.00	Off	False
-4.4	0.00	19.93	0.00	Off	False
-4.3	0.00	19.93	0.00	Off	False
-4.2	0.00	19.93	0.00	Off	False
-4.1	0.00	19.93	0.00	Off	False
-4.0	0.00	19.93	0.00	Off	False
-3.9	0.00	19.93	0.00	Off	False
-3.8	0.00	19.93	0.00	Off	False
-3.7	0.00	19.93	0.00	Off	False
-3.6	0.00	19.93	0.00	Off	False
-3.5	0.00	19.93	0.00	Off	False
-3.4	0.00	19.93	0.00	Off	False
-3.3	0.00	19.93	0.00	Off	False
-3.2	0.00	19.93	0.00	Off	False
-3.1	0.00	19.93	0.00	Off	False
-3.0	0.00	19.93	0.00	Off	False
-2.9	0.00	19.93	0.00	Off	False
-2.8	0.00	19.93	0.00	Off	False
-2.7	0.00	19.93	0.00	Off	False
-2.6	0.00	19.93	0.00	Off	False
-2.5	0.00	19.93	0.00	Off	False
-2.4	0.00	19.93	0.00	Off	False
-2.3	0.00	19.93	0.00	Off	False
-2.2	0.00	19.93	0.00	Off	False
-2.1	0.00	19.93	0.00	Off	False

Time (sec)	AEB Object Relative Longitudinal Acceleration (m/s^2)	AEB Object Lateral Distance (m)	AEB Object Lateral Velocity (m/s)	Vehicle Ahead Indicator Request Status	Tailgate Alert Request Status
-2.0	0.00	19.93	0.00	Off	False
-1.9	0.00	19.93	0.00	Off	False
-1.8	0.00	19.93	0.00	Off	False
-1.7	0.00	19.93	0.00	Off	False
-1.6	0.00	19.93	0.00	Off	False
-1.5	0.00	19.93	0.00	Off	False
-1.4	0.00	19.93	0.00	Off	False
-1.3	0.00	19.93	0.00	Off	False
-1.2	0.00	19.93	0.00	Off	False
-1.1	0.00	19.93	0.00	Off	False
-1.0	0.00	19.93	0.00	Off	False
-0.9	0.00	19.93	0.00	Off	False
-0.8	0.00	19.93	0.00	Off	False
-0.7	0.00	19.93	0.00	Off	False
-0.6	0.00	19.93	0.00	Off	False
-0.5	0.00	19.93	0.00	Off	False
-0.4	0.00	19.93	0.00	Off	False
-0.3	0.00	19.93	0.00	Off	False
-0.2	0.00	19.93	0.00	Off	False
-0.1	0.00	19.93	0.00	Off	False
0.0	0.00	19.93	0.00	Off	False

Event Data (Record 1 - SIR Event Non-Frontal Deployment) - Table 5 of 12

Time (sec)	FCA Alert Request Status	AEB Brake Request Active	AEB Brake Request Type	AEB Braking Requested Acceleration (m/s^2)	AEB Axle Torque Request Active
-7.9	Off	False	None	0.00	False
-7.8	Off	False	None	0.00	False
-7.7	Off	False	None	0.00	False
-7.6	Off	False	None	0.00	False
-7.5	Off	False	None	0.00	False
-7.4	Off	False	None	0.00	False
-7.3	Off	False	None	0.00	False
-7.2	Off	False	None	0.00	False
-7.1	Off	False	None	0.00	False
-7.0	Off	False	None	0.00	False
-6.9	Off	False	None	0.00	False
-6.8	Off	False	None	0.00	False
-6.7	Off	False	None	0.00	False
-6.6	Off	False	None	0.00	False
-6.5	Off	False	None	0.00	False
-6.4	Off	False	None	0.00	False
-6.3	Off	False	None	0.00	False
-6.2	Off	False	None	0.00	False
-6.1	Off	False	None	0.00	False
-6.0	Off	False	None	0.00	False
-5.9	Off	False	None	0.00	False
-5.8	Off	False	None	0.00	False
-5.7	Off	False	None	0.00	False
-5.6	Off	False	None	0.00	False
-5.5	Off	False	None	0.00	False
-5.4	Off	False	None	0.00	False
-5.3	Off	False	None	0.00	False
-5.2	Off	False	None	0.00	False
-5.1	Off	False	None	0.00	False
-5.0	Off	False	None	0.00	False
-4.9	Off	False	None	0.00	False
-4.8	Off	False	None	0.00	False
-4.7	Off	False	None	0.00	False
-4.6	Off	False	None	0.00	False
-4.5	Off	False	None	0.00	False
-4.4	Off	False	None	0.00	False
-4.3	Off	False	None	0.00	False
-4.2	Off	False	None	0.00	False
-4.1	Off	False	None	0.00	False
-4.0	Off	False	None	0.00	False
-3.9	Off	False	None	0.00	False
-3.8	Off	False	None	0.00	False
-3.7	Off	False	None	0.00	False
-3.6	Off	False	None	0.00	False
-3.5	Off	False	None	0.00	False
-3.4	Off	False	None	0.00	False
-3.3	Off	False	None	0.00	False
-3.2	Off	False	None	0.00	False
-3.1	Off	False	None	0.00	False
-3.0	Off	False	None	0.00	False
-2.9	Off	False	None	0.00	False
-2.8	Off	False	None	0.00	False
-2.7	Off	False	None	0.00	False
-2.6	Off	False	None	0.00	False
-2.5	Off	False	None	0.00	False
-2.4	Off	False	None	0.00	False
-2.3	Off	False	None	0.00	False
-2.2	Off	False	None	0.00	False
-2.1	Off	False	None	0.00	False

Time (sec)	FCA Alert Request Status	AEB Brake Request Active	AEB Brake Request Type	AEB Braking Requested Acceleration (m/s^2)	AEB Axle Torque Request Active
-2.0	Off	False	None	0.00	False
-1.9	Off	False	None	0.00	False
-1.8	Off	False	None	0.00	False
-1.7	Off	False	None	0.00	False
-1.6	Off	False	None	0.00	False
-1.5	Off	False	None	0.00	False
-1.4	Off	False	None	0.00	False
-1.3	Off	False	None	0.00	False
-1.2	Off	False	None	0.00	False
-1.1	Off	False	None	0.00	False
-1.0	Off	False	None	0.00	False
-0.9	Off	False	None	0.00	False
-0.8	Off	False	None	0.00	False
-0.7	Off	False	None	0.00	False
-0.6	Off	False	None	0.00	False
-0.5	Off	False	None	0.00	False
-0.4	Off	False	None	0.00	False
-0.3	Off	False	None	0.00	False
-0.2	Off	False	None	0.00	False
-0.1	Off	False	None	0.00	False
0.0	Off	False	None	0.00	False

Event Data (Record 1 - SIR Event Non-Frontal Deployment) - Table 6 of 12

Time (sec)	FPB Warning Request Status	FPB Brake Request Active	FPB Brake Request Type	FPB Braking Requested Acceleration (m/s^2)	FPB Pedestrian Longitudinal Distance (m)
-7.9	None	False	None	0.00	100.40
-7.8	None	False	None	0.00	100.40
-7.7	None	False	None	0.00	100.40
-7.6	None	False	None	0.00	100.40
-7.5	None	False	None	0.00	100.40
-7.4	None	False	None	0.00	100.40
-7.3	None	False	None	0.00	100.40
-7.2	None	False	None	0.00	100.40
-7.1	None	False	None	0.00	100.40
-7.0	None	False	None	0.00	100.40
-6.9	None	False	None	0.00	100.40
-6.8	None	False	None	0.00	100.40
-6.7	None	False	None	0.00	100.40
-6.6	None	False	None	0.00	100.40
-6.5	None	False	None	0.00	100.40
-6.4	None	False	None	0.00	100.40
-6.3	None	False	None	0.00	100.40
-6.2	None	False	None	0.00	100.40
-6.1	None	False	None	0.00	100.40
-6.0	None	False	None	0.00	100.40
-5.9	None	False	None	0.00	100.40
-5.8	None	False	None	0.00	100.40
-5.7	None	False	None	0.00	100.40
-5.6	None	False	None	0.00	100.40
-5.5	None	False	None	0.00	100.40
-5.4	None	False	None	0.00	100.40
-5.3	None	False	None	0.00	100.40
-5.2	None	False	None	0.00	100.40
-5.1	None	False	None	0.00	100.40
-5.0	None	False	None	0.00	100.40
-4.9	None	False	None	0.00	100.40
-4.8	None	False	None	0.00	100.40
-4.7	None	False	None	0.00	100.40
-4.6	None	False	None	0.00	100.40
-4.5	None	False	None	0.00	100.40
-4.4	None	False	None	0.00	100.40
-4.3	None	False	None	0.00	100.40
-4.2	None	False	None	0.00	100.40
-4.1	None	False	None	0.00	100.40
-4.0	None	False	None	0.00	100.40
-3.9	None	False	None	0.00	100.40
-3.8	None	False	None	0.00	100.40
-3.7	None	False	None	0.00	100.40
-3.6	None	False	None	0.00	100.40
-3.5	None	False	None	0.00	100.40
-3.4	None	False	None	0.00	100.40
-3.3	None	False	None	0.00	100.40
-3.2	None	False	None	0.00	100.40
-3.1	None	False	None	0.00	100.40
-3.0	None	False	None	0.00	100.40
-2.9	None	False	None	0.00	100.40
-2.8	None	False	None	0.00	100.40
-2.7	None	False	None	0.00	100.40
-2.6	None	False	None	0.00	100.40
-2.5	None	False	None	0.00	100.40
-2.4	None	False	None	0.00	100.40
-2.3	None	False	None	0.00	100.40
-2.2	None	False	None	0.00	100.40
-2.1	None	False	None	0.00	100.40

Time (sec)	FPB Warning Request Status	FPB Brake Request Active	FPB Brake Request Type	FPB Braking Requested Acceleration (m/s^2)	FPB Pedestrian Longitudinal Distance (m)
-2.0	None	False	None	0.00	100.40
-1.9	None	False	None	0.00	100.40
-1.8	None	False	None	0.00	100.40
-1.7	None	False	None	0.00	100.40
-1.6	None	False	None	0.00	100.40
-1.5	None	False	None	0.00	100.40
-1.4	None	False	None	0.00	100.40
-1.3	None	False	None	0.00	100.40
-1.2	None	False	None	0.00	100.40
-1.1	None	False	None	0.00	100.40
-1.0	None	False	None	0.00	100.40
-0.9	None	False	None	0.00	100.40
-0.8	None	False	None	0.00	100.40
-0.7	None	False	None	0.00	100.40
-0.6	None	False	None	0.00	100.40
-0.5	None	False	None	0.00	100.40
-0.4	None	False	None	0.00	100.40
-0.3	None	False	None	0.00	100.40
-0.2	None	False	None	0.00	100.40
-0.1	None	False	None	0.00	100.40
0.0	None	False	None	0.00	100.40

Event Data (Record 1 - SIR Event Non-Frontal Deployment) - Table 7 of 12

Time (sec)	FPB Pedestrian Longitudinal Velocity (m/s)	FPB Pedestrian Longitudinal Acceleration (m/s^2)	FPB Pedestrian Lateral Distance (m)	FPB Pedestrian Lateral Velocity (m/s)	Driver Hand Detected on Steering Wheel
-7.9	0.00	0.00	15.94	0.00	Unknown
-7.8	0.00	0.00	15.94	0.00	Unknown
-7.7	0.00	0.00	15.94	0.00	Unknown
-7.6	0.00	0.00	15.94	0.00	Unknown
-7.5	0.00	0.00	15.94	0.00	Unknown
-7.4	0.00	0.00	15.94	0.00	Unknown
-7.3	0.00	0.00	15.94	0.00	Unknown
-7.2	0.00	0.00	15.94	0.00	Unknown
-7.1	0.00	0.00	15.94	0.00	Unknown
-7.0	0.00	0.00	15.94	0.00	Unknown
-6.9	0.00	0.00	15.94	0.00	Unknown
-6.8	0.00	0.00	15.94	0.00	Unknown
-6.7	0.00	0.00	15.94	0.00	Unknown
-6.6	0.00	0.00	15.94	0.00	Unknown
-6.5	0.00	0.00	15.94	0.00	Unknown
-6.4	0.00	0.00	15.94	0.00	Unknown
-6.3	0.00	0.00	15.94	0.00	Unknown
-6.2	0.00	0.00	15.94	0.00	Unknown
-6.1	0.00	0.00	15.94	0.00	Unknown
-6.0	0.00	0.00	15.94	0.00	Unknown
-5.9	0.00	0.00	15.94	0.00	Unknown
-5.8	0.00	0.00	15.94	0.00	Unknown
-5.7	0.00	0.00	15.94	0.00	Unknown
-5.6	0.00	0.00	15.94	0.00	Unknown
-5.5	0.00	0.00	15.94	0.00	Unknown
-5.4	0.00	0.00	15.94	0.00	Unknown
-5.3	0.00	0.00	15.94	0.00	Unknown
-5.2	0.00	0.00	15.94	0.00	Unknown
-5.1	0.00	0.00	15.94	0.00	Unknown
-5.0	0.00	0.00	15.94	0.00	Unknown
-4.9	0.00	0.00	15.94	0.00	Unknown
-4.8	0.00	0.00	15.94	0.00	Unknown
-4.7	0.00	0.00	15.94	0.00	Unknown
-4.6	0.00	0.00	15.94	0.00	Unknown
-4.5	0.00	0.00	15.94	0.00	Unknown
-4.4	0.00	0.00	15.94	0.00	Unknown
-4.3	0.00	0.00	15.94	0.00	Unknown
-4.2	0.00	0.00	15.94	0.00	Unknown
-4.1	0.00	0.00	15.94	0.00	Unknown
-4.0	0.00	0.00	15.94	0.00	Unknown
-3.9	0.00	0.00	15.94	0.00	Unknown
-3.8	0.00	0.00	15.94	0.00	On
-3.7	0.00	0.00	15.94	0.00	On
-3.6	0.00	0.00	15.94	0.00	On
-3.5	0.00	0.00	15.94	0.00	On
-3.4	0.00	0.00	15.94	0.00	On
-3.3	0.00	0.00	15.94	0.00	On
-3.2	0.00	0.00	15.94	0.00	On
-3.1	0.00	0.00	15.94	0.00	On
-3.0	0.00	0.00	15.94	0.00	On
-2.9	0.00	0.00	15.94	0.00	On
-2.8	0.00	0.00	15.94	0.00	On
-2.7	0.00	0.00	15.94	0.00	On
-2.6	0.00	0.00	15.94	0.00	On
-2.5	0.00	0.00	15.94	0.00	On
-2.4	0.00	0.00	15.94	0.00	On
-2.3	0.00	0.00	15.94	0.00	On
-2.2	0.00	0.00	15.94	0.00	On
-2.1	0.00	0.00	15.94	0.00	On

Time (sec)	FPB Pedestrian Longitudinal Velocity (m/s)	FPB Pedestrian Longitudinal Acceleration (m/s^2)	FPB Pedestrian Lateral Distance (m)	FPB Pedestrian Lateral Velocity (m/s)	Driver Hand Detected on Steering Wheel
-2.0	0.00	0.00	15.94	0.00	On
-1.9	0.00	0.00	15.94	0.00	On
-1.8	0.00	0.00	15.94	0.00	On
-1.7	0.00	0.00	15.94	0.00	On
-1.6	0.00	0.00	15.94	0.00	On
-1.5	0.00	0.00	15.94	0.00	On
-1.4	0.00	0.00	15.94	0.00	On
-1.3	0.00	0.00	15.94	0.00	On
-1.2	0.00	0.00	15.94	0.00	On
-1.1	0.00	0.00	15.94	0.00	On
-1.0	0.00	0.00	15.94	0.00	On
-0.9	0.00	0.00	15.94	0.00	On
-0.8	0.00	0.00	15.94	0.00	On
-0.7	0.00	0.00	15.94	0.00	On
-0.6	0.00	0.00	15.94	0.00	On
-0.5	0.00	0.00	15.94	0.00	On
-0.4	0.00	0.00	15.94	0.00	On
-0.3	0.00	0.00	15.94	0.00	On
-0.2	0.00	0.00	15.94	0.00	On
-0.1	0.00	0.00	15.94	0.00	On
0.0	0.00	0.00	15.94	0.00	On

Event Data (Record 1 - SIR Event Non-Frontal Deployment) - Table 8 of 12

Time (sec)	Driver Hand Detection Confidence Level	Left SBZA Telltale State	Right SBZA Telltale State	LDW and Control Feature State	LKA Requested Torque Type
-7.9	Unknown	Off	Off	Off	No Control
-7.8	Unknown	Off	Off	Off	No Control
-7.7	Unknown	Off	Off	Off	No Control
-7.6	Unknown	Off	Off	Off	No Control
-7.5	Unknown	Off	Off	Off	No Control
-7.4	Unknown	Off	Off	Off	No Control
-7.3	Unknown	Off	Off	Off	No Control
-7.2	Unknown	Off	Off	Off	No Control
-7.1	Unknown	Off	Off	Off	No Control
-7.0	Unknown	Off	Off	Off	No Control
-6.9	Unknown	Off	Off	Off	No Control
-6.8	Unknown	Off	Off	Off	No Control
-6.7	Unknown	Off	Off	Off	No Control
-6.6	Unknown	Off	Off	Off	No Control
-6.5	Unknown	Off	Off	Off	No Control
-6.4	Unknown	Off	Off	Off	No Control
-6.3	Unknown	Off	Off	Off	No Control
-6.2	Unknown	Off	Off	Off	No Control
-6.1	Unknown	Off	Off	Off	No Control
-6.0	Unknown	Off	Off	Off	No Control
-5.9	Unknown	Off	Off	Off	No Control
-5.8	Unknown	Off	Off	Off	No Control
-5.7	Unknown	Off	Off	Off	No Control
-5.6	Unknown	Off	Off	Off	No Control
-5.5	Unknown	Off	Off	Off	No Control
-5.4	Unknown	Off	Off	Off	No Control
-5.3	Unknown	Off	Off	Off	No Control
-5.2	Unknown	Off	Off	Off	No Control
-5.1	Unknown	Off	Off	Off	No Control
-5.0	Unknown	Off	Off	Off	No Control
-4.9	Unknown	Off	Off	Off	No Control
-4.8	Unknown	Off	Off	Off	No Control
-4.7	Unknown	Off	Off	Off	No Control
-4.6	Unknown	Off	Off	Off	No Control
-4.5	Unknown	Off	Off	Off	No Control
-4.4	Unknown	Off	Off	Off	No Control
-4.3	Unknown	Off	Off	Off	No Control
-4.2	Unknown	Off	Off	Off	No Control
-4.1	Unknown	Off	Off	Off	No Control
-4.0	Unknown	Off	Off	Off	No Control
-3.9	Unknown	Off	Off	Off	No Control
-3.8	Low	Off	Off	Off	No Control
-3.7	Low	Off	Off	Off	No Control
-3.6	Low	Off	Off	Off	No Control
-3.5	Low	Off	Off	Off	No Control
-3.4	Low	Off	Off	Off	No Control
-3.3	Low	Off	Off	Off	No Control
-3.2	Low	Off	Off	Off	No Control
-3.1	Low	Off	Off	Off	No Control
-3.0	Low	Off	Off	Off	No Control
-2.9	Low	Off	Off	Off	No Control
-2.8	Low	Off	Off	Off	No Control
-2.7	Low	Off	Off	Off	No Control
-2.6	Low	Off	Off	Off	No Control
-2.5	Low	Off	Off	Off	No Control
-2.4	Low	Off	Off	Off	No Control
-2.3	Low	Off	Off	Off	No Control
-2.2	Low	Off	Off	Off	No Control
-2.1	Low	Off	Off	Off	No Control

Time (sec)	Driver Hand Detection Confidence Level	Left SBZA Telltale State	Right SBZA Telltale State	LDW and Control Feature State	LKA Requested Torque Type
-2.0	Low	Off	Off	Off	No Control
-1.9	Low	Off	Off	Off	No Control
-1.8	Low	Off	Off	Off	No Control
-1.7	Low	Off	Off	Off	No Control
-1.6	Low	Off	Off	Off	No Control
-1.5	Low	Off	Off	Off	No Control
-1.4	Low	Off	Off	Off	No Control
-1.3	Low	Off	Off	Off	No Control
-1.2	Low	Off	Off	Off	No Control
-1.1	Low	Off	Off	Off	No Control
-1.0	Low	Off	Off	Off	No Control
-0.9	Low	Off	Off	Off	No Control
-0.8	Low	Off	Off	Off	No Control
-0.7	Low	Off	Off	Off	No Control
-0.6	Low	Off	Off	Off	No Control
-0.5	Low	Off	Off	Off	No Control
-0.4	Low	Off	Off	Off	No Control
-0.3	Low	Off	Off	Off	No Control
-0.2	Low	Off	Off	Off	No Control
-0.1	Low	Off	Off	Off	No Control
0.0	Low	Off	Off	Off	No Control

Event Data (Record 1 - SIR Event Non-Frontal Deployment) - Table 9 of 12

Time (sec)	LKA Visual Alert Request Status	Left Lane Marking Lateral Offset (m)	Right Lane Marking Lateral Offset (m)	ACC Axle Torque Request Active	ACC Brake Request Type
-7.9	Indicator Off	1.83	-0.96	False	No Braking
-7.8	Indicator Off	1.83	-0.96	False	No Braking
-7.7	Indicator Off	1.83	-0.96	False	No Braking
-7.6	Indicator Off	1.83	-0.96	False	No Braking
-7.5	Indicator Off	1.83	-0.96	False	No Braking
-7.4	Indicator Off	1.83	-0.96	False	No Braking
-7.3	Indicator Off	1.83	-0.96	False	No Braking
-7.2	Indicator Off	1.83	-0.96	False	No Braking
-7.1	Indicator Off	1.83	-0.96	False	No Braking
-7.0	Indicator Off	1.83	-0.96	False	No Braking
-6.9	Indicator Off	1.83	-0.96	False	No Braking
-6.8	Indicator Off	1.83	-0.96	False	No Braking
-6.7	Indicator Off	1.83	-0.96	False	No Braking
-6.6	Indicator Off	1.83	-0.96	False	No Braking
-6.5	Indicator Off	1.83	-0.96	False	No Braking
-6.4	Indicator Off	1.83	-0.96	False	No Braking
-6.3	Indicator Off	1.83	-0.96	False	No Braking
-6.2	Indicator Off	1.83	-0.96	False	No Braking
-6.1	Indicator Off	1.83	-0.96	False	No Braking
-6.0	Indicator Off	1.83	-0.96	False	No Braking
-5.9	Indicator Off	1.83	-0.96	False	No Braking
-5.8	Indicator Off	1.83	-0.96	False	No Braking
-5.7	Indicator Off	1.83	-0.96	False	No Braking
-5.6	Indicator Off	1.83	-0.96	False	No Braking
-5.5	Indicator Off	1.83	-0.96	False	No Braking
-5.4	Indicator Off	1.83	-0.96	False	No Braking
-5.3	Indicator Off	1.83	-0.96	False	No Braking
-5.2	Indicator Off	1.83	-0.96	False	No Braking
-5.1	Indicator Off	1.83	-0.96	False	No Braking
-5.0	Indicator Off	1.83	-0.96	False	No Braking
-4.9	Indicator Off	1.83	-0.96	False	No Braking
-4.8	Indicator Off	1.83	-0.96	False	No Braking
-4.7	Indicator Off	1.83	-0.96	False	No Braking
-4.6	Indicator Off	1.83	-0.96	False	No Braking
-4.5	Indicator Off	1.83	-0.96	False	No Braking
-4.4	Indicator Off	1.83	-0.96	False	No Braking
-4.3	Indicator Off	1.83	-0.96	False	No Braking
-4.2	Indicator Off	1.83	-0.96	False	No Braking
-4.1	Indicator Off	1.83	-0.96	False	No Braking
-4.0	Indicator Off	1.83	-0.96	False	No Braking
-3.9	Indicator Off	1.83	-0.96	False	No Braking
-3.8	Indicator Off	1.83	-0.96	False	No Braking
-3.7	Indicator Off	1.83	-0.96	False	No Braking
-3.6	Indicator Off	1.83	-0.96	False	No Braking
-3.5	Indicator Off	1.83	-0.96	False	No Braking
-3.4	Indicator Off	1.83	-0.96	False	No Braking
-3.3	Indicator Off	1.83	-0.96	False	No Braking
-3.2	Indicator Off	1.83	-0.96	False	No Braking
-3.1	Indicator Off	1.83	-0.96	False	No Braking
-3.0	Indicator Off	1.83	-0.96	False	No Braking
-2.9	Indicator Off	1.83	-0.96	False	No Braking
-2.8	Indicator Off	1.83	-0.96	False	No Braking
-2.7	Indicator Off	1.83	-0.96	False	No Braking
-2.6	Indicator Off	1.83	-0.96	False	No Braking
-2.5	Indicator Off	1.83	-0.96	False	No Braking
-2.4	Indicator Off	1.83	-0.96	False	No Braking
-2.3	Indicator Off	1.83	-0.96	False	No Braking
-2.2	Indicator Off	1.83	-0.96	False	No Braking
-2.1	Indicator Off	1.83	-0.96	False	No Braking

Time (sec)	LKA Visual Alert Request Status	Left Lane Marking Lateral Offset (m)	Right Lane Marking Lateral Offset (m)	ACC Axle Torque Request Active	ACC Brake Request Type
-2.0	Indicator Off	1.83	-0.96	False	No Braking
-1.9	Indicator Off	1.83	-0.96	False	No Braking
-1.8	Indicator Off	1.83	-0.96	False	No Braking
-1.7	Indicator Off	1.83	-0.96	False	No Braking
-1.6	Indicator Off	1.83	-0.96	False	No Braking
-1.5	Indicator Off	1.83	-0.96	False	No Braking
-1.4	Indicator Off	1.83	-0.96	False	No Braking
-1.3	Indicator Off	1.83	-0.96	False	No Braking
-1.2	Indicator Off	1.83	-0.96	False	No Braking
-1.1	Indicator Off	1.83	-0.96	False	No Braking
-1.0	Indicator Off	1.83	-0.96	False	No Braking
-0.9	Indicator Off	1.83	-0.96	False	No Braking
-0.8	Indicator Off	1.83	-0.96	False	No Braking
-0.7	Indicator Off	1.83	-0.96	False	No Braking
-0.6	Indicator Off	0.00	0.00	False	No Braking
-0.5	Indicator Off	0.00	0.00	False	No Braking
-0.4	Indicator Off	0.00	0.00	False	No Braking
-0.3	Indicator Off	0.00	0.00	False	No Braking
-0.2	Indicator Off	0.00	0.00	False	No Braking
-0.1	Indicator Off	0.00	0.00	False	No Braking
0.0	Indicator Off	0.00	0.00	False	No Braking

Event Data (Record 1 - SIR Event Non-Frontal Deployment) - Table 10 of 12

Time (sec)	ACC Brake Request Active	ACC Braking Requested Acceleration (m/s^2)	LCC Driver Steering Detected	Steering Wheel Touch Zone 1	Steering Wheel Touch Zone 2
-7.9	False	0.0000	False	True	True
-7.8	False	0.0000	False	True	True
-7.7	False	0.0000	False	True	True
-7.6	False	0.0000	False	True	True
-7.5	False	0.0000	False	True	True
-7.4	False	0.0000	False	True	True
-7.3	False	0.0000	False	True	True
-7.2	False	0.0000	False	True	True
-7.1	False	0.0000	False	True	True
-7.0	False	0.0000	False	True	True
-6.9	False	0.0000	False	True	True
-6.8	False	0.0000	False	True	True
-6.7	False	0.0000	False	True	True
-6.6	False	0.0000	False	True	True
-6.5	False	0.0000	False	True	True
-6.4	False	0.0000	False	True	True
-6.3	False	0.0000	False	True	True
-6.2	False	0.0000	False	True	True
-6.1	False	0.0000	False	True	True
-6.0	False	0.0000	False	True	False
-5.9	False	0.0000	False	False	False
-5.8	False	0.0000	False	False	False
-5.7	False	0.0000	False	False	False
-5.6	False	0.0000	False	False	False
-5.5	False	0.0000	False	False	False
-5.4	False	0.0000	False	False	False
-5.3	False	0.0000	False	False	False
-5.2	False	0.0000	False	False	False
-5.1	False	0.0000	False	False	False
-5.0	False	0.0000	False	False	False
-4.9	False	0.0000	False	False	False
-4.8	False	0.0000	False	False	False
-4.7	False	0.0000	False	False	False
-4.6	False	0.0000	False	False	False
-4.5	False	0.0000	False	False	False
-4.4	False	0.0000	False	False	False
-4.3	False	0.0000	False	False	False
-4.2	False	0.0000	False	False	False
-4.1	False	0.0000	False	False	False
-4.0	False	0.0000	False	False	False
-3.9	False	0.0000	False	False	False
-3.8	False	0.0000	False	False	False
-3.7	False	0.0000	False	True	False
-3.6	False	0.0000	False	True	False
-3.5	False	0.0000	False	True	False
-3.4	False	0.0000	False	True	False
-3.3	False	0.0000	False	True	False
-3.2	False	0.0000	False	True	False
-3.1	False	0.0000	False	True	False
-3.0	False	0.0000	False	True	False
-2.9	False	0.0000	False	True	False
-2.8	False	0.0000	False	True	False
-2.7	False	0.0000	False	True	False
-2.6	False	0.0000	False	True	False
-2.5	False	0.0000	False	True	False
-2.4	False	0.0000	False	True	False
-2.3	False	0.0000	False	True	False
-2.2	False	0.0000	False	True	False
-2.1	False	0.0000	False	True	False

Time (sec)	ACC Brake Request Active	ACC Braking Requested Acceleration (m/s^2)	LCC Driver Steering Detected	Steering Wheel Touch Zone 1	Steering Wheel Touch Zone 2
-2.0	False	0.0000	False	True	False
-1.9	False	0.0000	False	True	False
-1.8	False	0.0000	False	True	False
-1.7	False	0.0000	False	True	False
-1.6	False	0.0000	False	True	False
-1.5	False	0.0000	False	True	False
-1.4	False	0.0000	False	True	False
-1.3	False	0.0000	False	True	False
-1.2	False	0.0000	False	True	False
-1.1	False	0.0000	False	True	False
-1.0	False	0.0000	False	True	False
-0.9	False	0.0000	False	True	False
-0.8	False	0.0000	False	True	False
-0.7	False	0.0000	False	False	False
-0.6	False	0.0000	False	False	False
-0.5	False	0.0000	False	False	False
-0.4	False	0.0000	False	False	False
-0.3	False	0.0000	False	False	False
-0.2	False	0.0000	False	False	False
-0.1	False	0.0000	False	False	False
0.0	False	0.0000	False	False	False

Event Data (Record 1 - SIR Event Non-Frontal Deployment) - Table 11 of 12

Time (sec)	Steering Wheel Touch Zone 3	Driver Attention State	LCC Visual Warning Request Status	LCC Visual Alert Request Status	LCC Light Bar Request Status
-7.9	False	Unknown	No Indication	Off	Off
-7.8	False	Unknown	No Indication	Off	Off
-7.7	False	Unknown	No Indication	Off	Off
-7.6	False	Unknown	No Indication	Off	Off
-7.5	False	Unknown	No Indication	Off	Off
-7.4	False	Unknown	No Indication	Off	Off
-7.3	False	Unknown	No Indication	Off	Off
-7.2	False	Unknown	No Indication	Off	Off
-7.1	False	Unknown	No Indication	Off	Off
-7.0	False	Unknown	No Indication	Off	Off
-6.9	False	Unknown	No Indication	Off	Off
-6.8	False	Unknown	No Indication	Off	Off
-6.7	False	Unknown	No Indication	Off	Off
-6.6	False	Unknown	No Indication	Off	Off
-6.5	False	Unknown	No Indication	Off	Off
-6.4	False	Unknown	No Indication	Off	Off
-6.3	False	Unknown	No Indication	Off	Off
-6.2	False	Unknown	No Indication	Off	Off
-6.1	False	Unknown	No Indication	Off	Off
-6.0	False	Unknown	No Indication	Off	Off
-5.9	False	Unknown	No Indication	Off	Off
-5.8	False	Unknown	No Indication	Off	Off
-5.7	False	Unknown	No Indication	Off	Off
-5.6	False	Unknown	No Indication	Off	Off
-5.5	False	Unknown	No Indication	Off	Off
-5.4	False	Unknown	No Indication	Off	Off
-5.3	False	Unknown	No Indication	Off	Off
-5.2	False	Unknown	No Indication	Off	Off
-5.1	False	Unknown	No Indication	Off	Off
-5.0	False	Unknown	No Indication	Off	Off
-4.9	False	Unknown	No Indication	Off	Off
-4.8	False	Unknown	No Indication	Off	Off
-4.7	False	Unknown	No Indication	Off	Off
-4.6	False	Unknown	No Indication	Off	Off
-4.5	False	Unknown	No Indication	Off	Off
-4.4	False	Unknown	No Indication	Off	Off
-4.3	False	Unknown	No Indication	Off	Off
-4.2	False	Unknown	No Indication	Off	Off
-4.1	False	Unknown	No Indication	Off	Off
-4.0	False	Unknown	No Indication	Off	Off
-3.9	False	Unknown	No Indication	Off	Off
-3.8	False	Unknown	No Indication	Off	Off
-3.7	False	Unknown	No Indication	Off	Off
-3.6	True	Unknown	No Indication	Off	Off
-3.5	True	Unknown	No Indication	Off	Off
-3.4	True	Unknown	No Indication	Off	Off
-3.3	True	Unknown	No Indication	Off	Off
-3.2	True	Unknown	No Indication	Off	Off
-3.1	True	Unknown	No Indication	Off	Off
-3.0	True	Unknown	No Indication	Off	Off
-2.9	True	Unknown	No Indication	Off	Off
-2.8	True	Unknown	No Indication	Off	Off
-2.7	True	Unknown	No Indication	Off	Off
-2.6	True	Unknown	No Indication	Off	Off
-2.5	True	Unknown	No Indication	Off	Off
-2.4	True	Unknown	No Indication	Off	Off
-2.3	True	Unknown	No Indication	Off	Off
-2.2	True	Unknown	No Indication	Off	Off
-2.1	True	Unknown	No Indication	Off	Off

Time (sec)	Steering Wheel Touch Zone 3	Driver Attention State	LCC Visual Warning Request Status	LCC Visual Alert Request Status	LCC Light Bar Request Status
-2.0	True	Unknown	No Indication	Off	Off
-1.9	True	Unknown	No Indication	Off	Off
-1.8	True	Unknown	No Indication	Off	Off
-1.7	True	Unknown	No Indication	Off	Off
-1.6	True	Unknown	No Indication	Off	Off
-1.5	False	Unknown	No Indication	Off	Off
-1.4	False	Unknown	No Indication	Off	Off
-1.3	False	Unknown	No Indication	Off	Off
-1.2	False	Unknown	No Indication	Off	Off
-1.1	False	Unknown	No Indication	Off	Off
-1.0	False	Unknown	No Indication	Off	Off
-0.9	False	Unknown	No Indication	Off	Off
-0.8	False	Unknown	No Indication	Off	Off
-0.7	False	Unknown	No Indication	Off	Off
-0.6	False	Unknown	No Indication	Off	Off
-0.5	False	Unknown	No Indication	Off	Off
-0.4	False	Unknown	No Indication	Off	Off
-0.3	False	Unknown	No Indication	Off	Off
-0.2	False	Unknown	No Indication	Off	Off
-0.1	False	Unknown	No Indication	Off	Off
0.0	False	Unknown	No Indication	Off	Off

Event Data (Record 1 - SIR Event Non-Frontal Deployment) - Table 12 of 12

Time (sec)	LCC Light Bar Flash Rate	Lane Change Request State	LCC Steering Request Active
-7.9	None	No Lane Change Requested	False
-7.8	None	No Lane Change Requested	False
-7.7	None	No Lane Change Requested	False
-7.6	None	No Lane Change Requested	False
-7.5	None	No Lane Change Requested	False
-7.4	None	No Lane Change Requested	False
-7.3	None	No Lane Change Requested	False
-7.2	None	No Lane Change Requested	False
-7.1	None	No Lane Change Requested	False
-7.0	None	No Lane Change Requested	False
-6.9	None	No Lane Change Requested	False
-6.8	None	No Lane Change Requested	False
-6.7	None	No Lane Change Requested	False
-6.6	None	No Lane Change Requested	False
-6.5	None	No Lane Change Requested	False
-6.4	None	No Lane Change Requested	False
-6.3	None	No Lane Change Requested	False
-6.2	None	No Lane Change Requested	False
-6.1	None	No Lane Change Requested	False

Time (sec)	LCC Light Bar Flash Rate	Lane Change Request State	LCC Steering Request Active
-6.0	None	No Lane Change Requested	False
-5.9	None	No Lane Change Requested	False
-5.8	None	No Lane Change Requested	False
-5.7	None	No Lane Change Requested	False
-5.6	None	No Lane Change Requested	False
-5.5	None	No Lane Change Requested	False
-5.4	None	No Lane Change Requested	False
-5.3	None	No Lane Change Requested	False
-5.2	None	No Lane Change Requested	False
-5.1	None	No Lane Change Requested	False
-5.0	None	No Lane Change Requested	False
-4.9	None	No Lane Change Requested	False
-4.8	None	No Lane Change Requested	False
-4.7	None	No Lane Change Requested	False
-4.6	None	No Lane Change Requested	False
-4.5	None	No Lane Change Requested	False
-4.4	None	No Lane Change Requested	False
-4.3	None	No Lane Change Requested	False
-4.2	None	No Lane Change Requested	False
-4.1	None	No Lane Change Requested	False

Time (sec)	LCC Light Bar Flash Rate	Lane Change Request State	LCC Steering Request Active
-4.0	None	No Lane Change Requested	False
-3.9	None	No Lane Change Requested	False
-3.8	None	No Lane Change Requested	False
-3.7	None	No Lane Change Requested	False
-3.6	None	No Lane Change Requested	False
-3.5	None	No Lane Change Requested	False
-3.4	None	No Lane Change Requested	False
-3.3	None	No Lane Change Requested	False
-3.2	None	No Lane Change Requested	False
-3.1	None	No Lane Change Requested	False
-3.0	None	No Lane Change Requested	False
-2.9	None	No Lane Change Requested	False
-2.8	None	No Lane Change Requested	False
-2.7	None	No Lane Change Requested	False
-2.6	None	No Lane Change Requested	False
-2.5	None	No Lane Change Requested	False
-2.4	None	No Lane Change Requested	False
-2.3	None	No Lane Change Requested	False
-2.2	None	No Lane Change Requested	False
-2.1	None	No Lane Change Requested	False

Time (sec)	LCC Light Bar Flash Rate	Lane Change Request State	LCC Steering Request Active
-2.0	None	No Lane Change Requested	False
-1.9	None	No Lane Change Requested	False
-1.8	None	No Lane Change Requested	False
-1.7	None	No Lane Change Requested	False
-1.6	None	No Lane Change Requested	False
-1.5	None	No Lane Change Requested	False
-1.4	None	No Lane Change Requested	False
-1.3	None	No Lane Change Requested	False
-1.2	None	No Lane Change Requested	False
-1.1	None	No Lane Change Requested	False
-1.0	None	No Lane Change Requested	False
-0.9	None	No Lane Change Requested	False
-0.8	None	No Lane Change Requested	False
-0.7	None	No Lane Change Requested	False
-0.6	None	No Lane Change Requested	False
-0.5	None	No Lane Change Requested	False
-0.4	None	No Lane Change Requested	False
-0.3	None	No Lane Change Requested	False
-0.2	None	No Lane Change Requested	False
-0.1	None	No Lane Change Requested	False

Time (sec)	LCC Light Bar Flash Rate	Lane Change Request State	LCC Steering Request Active
0.0	None	No Lane Change Requested	False

Event Data (500 ms) (Record 1 - SIR Event Non-Frontal Deployment) - Table 1 of 23

Time (sec)	Transmission Estimated Gear	Engine RPM (Engine Speed) (rpm)	Vehicle Motion Movement State	Logistics Mode Active	Turn Signal Switch Active
-7.5	Gear 1	561	Forward	False	None
-7.0	Gear 1	564	Forward	False	None
-6.5	Gear 1	572	Forward	False	None
-6.0	Gear 1	562	Forward	False	None
-5.5	Gear 1	574	Forward	False	None
-5.0	Gear 1	573	Forward	False	None
-4.5	Gear 1	1,085	Forward	False	None
-4.0	Gear 1	1,381	Forward	False	None
-3.5	Gear 1	1,593	Forward	False	None
-3.0	Gear 1	1,665	Forward	False	None
-2.5	Gear 1	2,434	Forward	False	None
-2.0	Gear 1	2,855	Forward	False	None
-1.5	Gear 1	3,391	Forward	False	None
-1.0	Gear 1	600	Forward	False	None
-0.5	Gear 1	600	Forward	False	None
0.0	Gear 1	600	Forward	False	None

Event Data (500 ms) (Record 1 - SIR Event Non-Frontal Deployment) - Table 2 of 23

Time (sec)	Teen Driver Mode Active	SDM Event Enabled	Driver Selected Trailer Present	Electronic Stability Control Status	Electronic Stability Control Active
-7.5	False	False	False	Normal Operation	False
-7.0	False	False	False	Normal Operation	False
-6.5	False	False	False	Normal Operation	False
-6.0	False	False	False	Normal Operation	False
-5.5	False	False	False	Normal Operation	False
-5.0	False	False	False	Normal Operation	False
-4.5	False	False	False	Normal Operation	False
-4.0	False	False	False	Normal Operation	False
-3.5	False	False	False	Normal Operation	False
-3.0	False	False	False	Normal Operation	False
-2.5	False	False	False	Normal Operation	False
-2.0	False	False	False	Normal Operation	False
-1.5	False	False	False	Normal Operation	False
-1.0	False	False	False	Normal Operation	False
-0.5	False	True	False	System Failed	False
0.0	False	True	False	System Failed	False

Event Data (500 ms) (Record 1 - SIR Event Non-Frontal Deployment) - Table 3 of 23

Time (sec)	Park Brake System Status	FCA Driver Inhibit Active	Forward Collision System Off Request Status	AEB System Off Request Status	FCA Enable Status
-7.5	Released	False	False	False	False
-7.0	Released	False	False	False	False
-6.5	Released	False	False	False	False
-6.0	Released	False	False	False	False
-5.5	Released	False	False	False	False
-5.0	Released	False	False	False	False
-4.5	Released	False	False	False	False
-4.0	Released	False	False	False	False
-3.5	Released	True	False	False	True
-3.0	Released	True	False	False	True
-2.5	Released	True	False	False	True
-2.0	Released	True	False	False	True
-1.5	Released	True	False	False	True
-1.0	Released	True	False	False	True
-0.5	Released	False	False	False	False
0.0	Released	False	False	True	False

Event Data (500 ms) (Record 1 - SIR Event Non-Frontal Deployment) - Table 4 of 23

Time (sec)	Forward Collision System Unavailable Request Status	AEB Driver Inhibit Active	AEB Driver Override Active	AEB Enable Status	FPB Driver Inhibit Active
-7.5	False	AEB	False	False	True
-7.0	False	AEB	False	False	True
-6.5	False	AEB	False	False	True
-6.0	False	AEB	False	False	True
-5.5	False	AEB	False	False	True
-5.0	False	None	False	False	True
-4.5	False	None	False	False	True
-4.0	False	None	False	False	True
-3.5	False	None	False	True	False
-3.0	False	None	False	True	False
-2.5	False	None	False	True	False
-2.0	False	None	False	True	False
-1.5	False	None	False	True	False
-1.0	False	All	False	True	False
-0.5	False	All	False	False	False
0.0	False	All	False	False	False

Event Data (500 ms) (Record 1 - SIR Event Non-Frontal Deployment) - Table 5 of 23

Time (sec)	FPB Driver Override Active	FPB Enable Status	LKA Customer Setting	LKA Driver Inhibit Active	LKA Driver Override Active
-7.5	False	False	Off	True	False
-7.0	False	False	Off	True	False
-6.5	False	False	Off	True	False
-6.0	False	False	Off	True	False
-5.5	False	False	Off	True	False
-5.0	False	False	Off	True	False
-4.5	False	False	Off	True	False
-4.0	False	False	Off	True	False
-3.5	False	False	Off	True	False
-3.0	False	True	Off	True	False
-2.5	False	True	Off	True	False
-2.0	False	True	Off	True	False
-1.5	False	True	Off	True	False
-1.0	False	False	Off	True	False
-0.5	False	False	Off	True	False
0.0	False	False	Off	True	False

Event Data (500 ms) (Record 1 - SIR Event Non-Frontal Deployment) - Table 6 of 23

Time (sec)	Construction Area Detection Status	Driver Attention Operational Status	Driver Attention Confidence Level	ACC Go Notifier Active	LCC HMI Alert Request Status
-7.5	False	Unknown	0	Not Stopped	Off
-7.0	False	Unknown	0	Not Stopped	Off
-6.5	False	Unknown	0	Not Stopped	Off
-6.0	False	Unknown	0	Not Stopped	Off
-5.5	False	Unknown	0	Not Stopped	Off
-5.0	False	Unknown	0	Not Stopped	Off
-4.5	False	Unknown	0	Not Stopped	Off
-4.0	False	Unknown	0	Not Stopped	Off
-3.5	False	Unknown	0	Not Stopped	Off
-3.0	False	Unknown	0	Not Stopped	Off
-2.5	False	Unknown	0	Not Stopped	Off
-2.0	False	Unknown	0	Not Stopped	Off
-1.5	False	Unknown	0	Not Stopped	Off
-1.0	False	Unknown	0	Not Stopped	Off
-0.5	False	Unknown	0	Not Stopped	Off
0.0	False	Unknown	0	Not Stopped	Off

Event Data (500 ms) (Record 1 - SIR Event Non-Frontal Deployment) - Table 7 of 23

Time (sec)	Left Lane Location 0 ID	Left Lane Location 1 ID	Left Lane Location 2 ID	Left Lane Location 3 ID	Left Lane Location 4 ID
-7.5	0	0	0	0	0
-7.0	0	0	0	0	0
-6.5	0	0	0	0	0
-6.0	0	0	0	0	0
-5.5	0	0	0	0	0
-5.0	0	0	0	0	0
-4.5	0	0	0	0	0
-4.0	0	0	0	0	0
-3.5	0	0	0	0	0
-3.0	0	0	0	0	0
-2.5	0	0	0	0	0
-2.0	0	0	0	0	0
-1.5	0	0	0	0	0
-1.0	0	0	0	0	0
-0.5	0	0	0	0	0
0.0	0	0	0	0	0

Event Data (500 ms) (Record 1 - SIR Event Non-Frontal Deployment) - Table 8 of 23

Time (sec)	Left Lane Location 5 ID	Left Lane Location 6 ID	Left Lane Location 7 ID	Right Lane Location 0 ID	Right Lane Location 1 ID
-7.5	0	0	0	0	0
-7.0	0	0	0	0	0
-6.5	0	0	0	0	0
-6.0	0	0	0	0	0
-5.5	0	0	0	0	0
-5.0	0	0	0	0	0
-4.5	0	0	0	0	0
-4.0	0	0	0	0	0
-3.5	0	0	0	0	0
-3.0	0	0	0	0	0
-2.5	0	0	0	0	0
-2.0	0	0	0	0	0
-1.5	0	0	0	0	0
-1.0	0	0	0	0	0
-0.5	0	0	0	0	0
0.0	0	0	0	0	0

Event Data (500 ms) (Record 1 - SIR Event Non-Frontal Deployment) - Table 9 of 23

Time (sec)	Right Lane Location 2 ID	Right Lane Location 3 ID	Right Lane Location 4 ID	Right Lane Location 5 ID	Right Lane Location 6 ID
-7.5	0	0	0	0	0
-7.0	0	0	0	0	0
-6.5	0	0	0	0	0
-6.0	0	0	0	0	0
-5.5	0	0	0	0	0
-5.0	0	0	0	0	0
-4.5	0	0	0	0	0
-4.0	0	0	0	0	0
-3.5	0	0	0	0	0
-3.0	0	0	0	0	0
-2.5	0	0	0	0	0
-2.0	0	0	0	0	0
-1.5	0	0	0	0	0
-1.0	0	0	0	0	0
-0.5	0	0	0	0	0
0.0	0	0	0	0	0

Event Data (500 ms) (Record 1 - SIR Event Non-Frontal Deployment) - Table 10 of 23

Time (sec)	Right Lane Location 7 ID	Left Lane Location 0 Type	Left Lane Location 1 Type	Left Lane Location 2 Type	Left Lane Location 3 Type
-7.5	0	Unknown	Unknown	Unknown	Unknown
-7.0	0	Unknown	Unknown	Unknown	Unknown
-6.5	0	Unknown	Unknown	Unknown	Unknown
-6.0	0	Unknown	Unknown	Unknown	Unknown
-5.5	0	Unknown	Unknown	Unknown	Unknown
-5.0	0	Unknown	Unknown	Unknown	Unknown
-4.5	0	Unknown	Unknown	Unknown	Unknown
-4.0	0	Unknown	Unknown	Unknown	Unknown
-3.5	0	Unknown	Unknown	Unknown	Unknown
-3.0	0	Unknown	Unknown	Unknown	Unknown
-2.5	0	Unknown	Unknown	Unknown	Unknown
-2.0	0	Unknown	Unknown	Unknown	Unknown
-1.5	0	Unknown	Unknown	Unknown	Unknown
-1.0	0	Unknown	Unknown	Unknown	Unknown
-0.5	0	Unknown	Unknown	Unknown	Unknown
0.0	0	Unknown	Unknown	Unknown	Unknown

Event Data (500 ms) (Record 1 - SIR Event Non-Frontal Deployment) - Table 11 of 23

Time (sec)	Left Lane Location 4 Type	Left Lane Location 5 Type	Left Lane Location 6 Type	Left Lane Location 7 Type	Right Lane Location 0 Type
-7.5	Unknown	Unknown	Unknown	Unknown	Unknown
-7.0	Unknown	Unknown	Unknown	Unknown	Unknown
-6.5	Unknown	Unknown	Unknown	Unknown	Unknown
-6.0	Unknown	Unknown	Unknown	Unknown	Unknown
-5.5	Unknown	Unknown	Unknown	Unknown	Unknown
-5.0	Unknown	Unknown	Unknown	Unknown	Unknown
-4.5	Unknown	Unknown	Unknown	Unknown	Unknown
-4.0	Unknown	Unknown	Unknown	Unknown	Unknown
-3.5	Unknown	Unknown	Unknown	Unknown	Unknown
-3.0	Unknown	Unknown	Unknown	Unknown	Unknown
-2.5	Unknown	Unknown	Unknown	Unknown	Unknown
-2.0	Unknown	Unknown	Unknown	Unknown	Unknown
-1.5	Unknown	Unknown	Unknown	Unknown	Unknown
-1.0	Unknown	Unknown	Unknown	Unknown	Unknown
-0.5	Unknown	Unknown	Unknown	Unknown	Unknown
0.0	Unknown	Unknown	Unknown	Unknown	Unknown

Event Data (500 ms) (Record 1 - SIR Event Non-Frontal Deployment) - Table 12 of 23

Time (sec)	Right Lane Location 1 Type	Right Lane Location 2 Type	Right Lane Location 3 Type	Right Lane Location 4 Type	Right Lane Location 5 Type
-7.5	Unknown	Unknown	Unknown	Unknown	Unknown
-7.0	Unknown	Unknown	Unknown	Unknown	Unknown
-6.5	Unknown	Unknown	Unknown	Unknown	Unknown
-6.0	Unknown	Unknown	Unknown	Unknown	Unknown
-5.5	Unknown	Unknown	Unknown	Unknown	Unknown
-5.0	Unknown	Unknown	Unknown	Unknown	Unknown
-4.5	Unknown	Unknown	Unknown	Unknown	Unknown
-4.0	Unknown	Unknown	Unknown	Unknown	Unknown
-3.5	Unknown	Unknown	Unknown	Unknown	Unknown
-3.0	Unknown	Unknown	Unknown	Unknown	Unknown
-2.5	Unknown	Unknown	Unknown	Unknown	Unknown
-2.0	Unknown	Unknown	Unknown	Unknown	Unknown
-1.5	Unknown	Unknown	Unknown	Unknown	Unknown
-1.0	Unknown	Unknown	Unknown	Unknown	Unknown
-0.5	Unknown	Unknown	Unknown	Unknown	Unknown
0.0	Unknown	Unknown	Unknown	Unknown	Unknown

Event Data (500 ms) (Record 1 - SIR Event Non-Frontal Deployment) - Table 13 of 23

Time (sec)	Right Lane Location 6 Type	Right Lane Location 7 Type	Left Lane Location 0 Longitudinal Distance (m)	Left Lane Location 1 Longitudinal Distance (m)	Left Lane Location 2 Longitudinal Distance (m)
-7.5	Unknown	Unknown	199.98	199.98	199.98
-7.0	Unknown	Unknown	199.98	199.98	199.98
-6.5	Unknown	Unknown	199.98	199.98	199.98
-6.0	Unknown	Unknown	199.98	199.98	199.98
-5.5	Unknown	Unknown	199.98	199.98	199.98
-5.0	Unknown	Unknown	199.98	199.98	199.98
-4.5	Unknown	Unknown	199.98	199.98	199.98
-4.0	Unknown	Unknown	199.98	199.98	199.98
-3.5	Unknown	Unknown	199.98	199.98	199.98
-3.0	Unknown	Unknown	199.98	199.98	199.98
-2.5	Unknown	Unknown	199.98	199.98	199.98
-2.0	Unknown	Unknown	199.98	199.98	199.98
-1.5	Unknown	Unknown	199.98	199.98	199.98
-1.0	Unknown	Unknown	199.98	199.98	199.98
-0.5	Unknown	Unknown	199.98	199.98	199.98
0.0	Unknown	Unknown	199.98	199.98	199.98

Event Data (500 ms) (Record 1 - SIR Event Non-Frontal Deployment) - Table 14 of 23

Time (sec)	Left Lane Location 3 Longitudinal Distance (m)	Left Lane Location 4 Longitudinal Distance (m)	Left Lane Location 5 Longitudinal Distance (m)	Left Lane Location 6 Longitudinal Distance (m)	Left Lane Location 7 Longitudinal Distance (m)
-7.5	199.98	199.98	199.98	199.98	199.98
-7.0	199.98	199.98	199.98	199.98	199.98
-6.5	199.98	199.98	199.98	199.98	199.98
-6.0	199.98	199.98	199.98	199.98	199.98
-5.5	199.98	199.98	199.98	199.98	199.98
-5.0	199.98	199.98	199.98	199.98	199.98
-4.5	199.98	199.98	199.98	199.98	199.98
-4.0	199.98	199.98	199.98	199.98	199.98
-3.5	199.98	199.98	199.98	199.98	199.98
-3.0	199.98	199.98	199.98	199.98	199.98
-2.5	199.98	199.98	199.98	199.98	199.98
-2.0	199.98	199.98	199.98	199.98	199.98
-1.5	199.98	199.98	199.98	199.98	199.98
-1.0	199.98	199.98	199.98	199.98	199.98
-0.5	199.98	199.98	199.98	199.98	199.98
0.0	199.98	199.98	199.98	199.98	199.98

Event Data (500 ms) (Record 1 - SIR Event Non-Frontal Deployment) - Table 15 of 23

Time (sec)	Right Lane Location 0 Longitudinal Distance (m)	Right Lane Location 1 Longitudinal Distance (m)	Right Lane Location 2 Longitudinal Distance (m)	Right Lane Location 3 Longitudinal Distance (m)	Right Lane Location 4 Longitudinal Distance (m)
-7.5	199.98	199.98	199.98	199.98	199.98
-7.0	199.98	199.98	199.98	199.98	199.98
-6.5	199.98	199.98	199.98	199.98	199.98
-6.0	199.98	199.98	199.98	199.98	199.98
-5.5	199.98	199.98	199.98	199.98	199.98
-5.0	199.98	199.98	199.98	199.98	199.98
-4.5	199.98	199.98	199.98	199.98	199.98
-4.0	199.98	199.98	199.98	199.98	199.98
-3.5	199.98	199.98	199.98	199.98	199.98
-3.0	199.98	199.98	199.98	199.98	199.98
-2.5	199.98	199.98	199.98	199.98	199.98
-2.0	199.98	199.98	199.98	199.98	199.98
-1.5	199.98	199.98	199.98	199.98	199.98
-1.0	199.98	199.98	199.98	199.98	199.98
-0.5	199.98	199.98	199.98	199.98	199.98
0.0	199.98	199.98	199.98	199.98	199.98

Event Data (500 ms) (Record 1 - SIR Event Non-Frontal Deployment) - Table 16 of 23

Time (sec)	Right Lane Location 5 Longitudinal Distance (m)	Right Lane Location 6 Longitudinal Distance (m)	Right Lane Location 7 Longitudinal Distance (m)	Left Lane Location 0 Longitudinal Velocity (m/s)	Left Lane Location 1 Longitudinal Velocity (m/s)
-7.5	199.98	199.98	199.98	0.00	0.00
-7.0	199.98	199.98	199.98	0.00	0.00
-6.5	199.98	199.98	199.98	0.00	0.00
-6.0	199.98	199.98	199.98	0.00	0.00
-5.5	199.98	199.98	199.98	0.00	0.00
-5.0	199.98	199.98	199.98	0.00	0.00
-4.5	199.98	199.98	199.98	0.00	0.00
-4.0	199.98	199.98	199.98	0.00	0.00
-3.5	199.98	199.98	199.98	0.00	0.00
-3.0	199.98	199.98	199.98	0.00	0.00
-2.5	199.98	199.98	199.98	0.00	0.00
-2.0	199.98	199.98	199.98	0.00	0.00
-1.5	199.98	199.98	199.98	0.00	0.00
-1.0	199.98	199.98	199.98	0.00	0.00
-0.5	199.98	199.98	199.98	0.00	0.00
0.0	199.98	199.98	199.98	0.00	0.00

Event Data (500 ms) (Record 1 - SIR Event Non-Frontal Deployment) - Table 17 of 23

Time (sec)	Left Lane Location 2 Longitudinal Velocity (m/s)	Left Lane Location 3 Longitudinal Velocity (m/s)	Left Lane Location 4 Longitudinal Velocity (m/s)	Left Lane Location 5 Longitudinal Velocity (m/s)	Left Lane Location 6 Longitudinal Velocity (m/s)
-7.5	0.00	0.00	0.00	0.00	0.00
-7.0	0.00	0.00	0.00	0.00	0.00
-6.5	0.00	0.00	0.00	0.00	0.00
-6.0	0.00	0.00	0.00	0.00	0.00
-5.5	0.00	0.00	0.00	0.00	0.00
-5.0	0.00	0.00	0.00	0.00	0.00
-4.5	0.00	0.00	0.00	0.00	0.00
-4.0	0.00	0.00	0.00	0.00	0.00
-3.5	0.00	0.00	0.00	0.00	0.00
-3.0	0.00	0.00	0.00	0.00	0.00
-2.5	0.00	0.00	0.00	0.00	0.00
-2.0	0.00	0.00	0.00	0.00	0.00
-1.5	0.00	0.00	0.00	0.00	0.00
-1.0	0.00	0.00	0.00	0.00	0.00
-0.5	0.00	0.00	0.00	0.00	0.00
0.0	0.00	0.00	0.00	0.00	0.00

Event Data (500 ms) (Record 1 - SIR Event Non-Frontal Deployment) - Table 18 of 23

Time (sec)	Left Lane Location 7 Longitudinal Velocity (m/s)	Right Lane Location 0 Longitudinal Velocity (m/s)	Right Lane Location 1 Longitudinal Velocity (m/s)	Right Lane Location 2 Longitudinal Velocity (m/s)	Right Lane Location 3 Longitudinal Velocity (m/s)
-7.5	0.00	0.00	0.00	0.00	0.00
-7.0	0.00	0.00	0.00	0.00	0.00
-6.5	0.00	0.00	0.00	0.00	0.00
-6.0	0.00	0.00	0.00	0.00	0.00
-5.5	0.00	0.00	0.00	0.00	0.00
-5.0	0.00	0.00	0.00	0.00	0.00
-4.5	0.00	0.00	0.00	0.00	0.00
-4.0	0.00	0.00	0.00	0.00	0.00
-3.5	0.00	0.00	0.00	0.00	0.00
-3.0	0.00	0.00	0.00	0.00	0.00
-2.5	0.00	0.00	0.00	0.00	0.00
-2.0	0.00	0.00	0.00	0.00	0.00
-1.5	0.00	0.00	0.00	0.00	0.00
-1.0	0.00	0.00	0.00	0.00	0.00
-0.5	0.00	0.00	0.00	0.00	0.00
0.0	0.00	0.00	0.00	0.00	0.00

Event Data (500 ms) (Record 1 - SIR Event Non-Frontal Deployment) - Table 19 of 23

Time (sec)	Right Lane Location 4 Longitudinal Velocity (m/s)	Right Lane Location 5 Longitudinal Velocity (m/s)	Right Lane Location 6 Longitudinal Velocity (m/s)	Right Lane Location 7 Longitudinal Velocity (m/s)	Left Lane Location 0 Lateral Distance (m)
-7.5	0.00	0.00	0.00	0.00	0.00
-7.0	0.00	0.00	0.00	0.00	0.00
-6.5	0.00	0.00	0.00	0.00	0.00
-6.0	0.00	0.00	0.00	0.00	0.00
-5.5	0.00	0.00	0.00	0.00	0.00
-5.0	0.00	0.00	0.00	0.00	0.00
-4.5	0.00	0.00	0.00	0.00	0.00
-4.0	0.00	0.00	0.00	0.00	0.00
-3.5	0.00	0.00	0.00	0.00	0.00
-3.0	0.00	0.00	0.00	0.00	0.00
-2.5	0.00	0.00	0.00	0.00	0.00
-2.0	0.00	0.00	0.00	0.00	0.00
-1.5	0.00	0.00	0.00	0.00	0.00
-1.0	0.00	0.00	0.00	0.00	0.00
-0.5	0.00	0.00	0.00	0.00	0.00
0.0	0.00	0.00	0.00	0.00	0.00

Event Data (500 ms) (Record 1 - SIR Event Non-Frontal Deployment) - Table 20 of 23

Time (sec)	Left Lane Location 1 Lateral Distance (m)	Left Lane Location 2 Lateral Distance (m)	Left Lane Location 3 Lateral Distance (m)	Left Lane Location 4 Lateral Distance (m)	Left Lane Location 5 Lateral Distance (m)
-7.5	0.00	0.00	0.00	0.00	0.00
-7.0	0.00	0.00	0.00	0.00	0.00
-6.5	0.00	0.00	0.00	0.00	0.00
-6.0	0.00	0.00	0.00	0.00	0.00
-5.5	0.00	0.00	0.00	0.00	0.00
-5.0	0.00	0.00	0.00	0.00	0.00
-4.5	0.00	0.00	0.00	0.00	0.00
-4.0	0.00	0.00	0.00	0.00	0.00
-3.5	0.00	0.00	0.00	0.00	0.00
-3.0	0.00	0.00	0.00	0.00	0.00
-2.5	0.00	0.00	0.00	0.00	0.00
-2.0	0.00	0.00	0.00	0.00	0.00
-1.5	0.00	0.00	0.00	0.00	0.00
-1.0	0.00	0.00	0.00	0.00	0.00
-0.5	0.00	0.00	0.00	0.00	0.00
0.0	0.00	0.00	0.00	0.00	0.00

Event Data (500 ms) (Record 1 - SIR Event Non-Frontal Deployment) - Table 21 of 23

Time (sec)	Left Lane Location 6 Lateral Distance (m)	Left Lane Location 7 Lateral Distance (m)	Right Lane Location 0 Lateral Distance (m)	Right Lane Location 1 Lateral Distance (m)	Right Lane Location 2 Lateral Distance (m)
-7.5	0.00	0.00	0.00	0.00	0.00
-7.0	0.00	0.00	0.00	0.00	0.00
-6.5	0.00	0.00	0.00	0.00	0.00
-6.0	0.00	0.00	0.00	0.00	0.00
-5.5	0.00	0.00	0.00	0.00	0.00
-5.0	0.00	0.00	0.00	0.00	0.00
-4.5	0.00	0.00	0.00	0.00	0.00
-4.0	0.00	0.00	0.00	0.00	0.00
-3.5	0.00	0.00	0.00	0.00	0.00
-3.0	0.00	0.00	0.00	0.00	0.00
-2.5	0.00	0.00	0.00	0.00	0.00
-2.0	0.00	0.00	0.00	0.00	0.00
-1.5	0.00	0.00	0.00	0.00	0.00
-1.0	0.00	0.00	0.00	0.00	0.00
-0.5	0.00	0.00	0.00	0.00	0.00
0.0	0.00	0.00	0.00	0.00	0.00

Event Data (500 ms) (Record 1 - SIR Event Non-Frontal Deployment) - Table 22 of 23

Time (sec)	Right Lane Location 3 Lateral Distance (m)	Right Lane Location 4 Lateral Distance (m)	Right Lane Location 5 Lateral Distance (m)	Right Lane Location 6 Lateral Distance (m)	Right Lane Location 7 Lateral Distance (m)
-7.5	0.00	0.00	0.00	0.00	0.00
-7.0	0.00	0.00	0.00	0.00	0.00
-6.5	0.00	0.00	0.00	0.00	0.00
-6.0	0.00	0.00	0.00	0.00	0.00
-5.5	0.00	0.00	0.00	0.00	0.00
-5.0	0.00	0.00	0.00	0.00	0.00
-4.5	0.00	0.00	0.00	0.00	0.00
-4.0	0.00	0.00	0.00	0.00	0.00
-3.5	0.00	0.00	0.00	0.00	0.00
-3.0	0.00	0.00	0.00	0.00	0.00
-2.5	0.00	0.00	0.00	0.00	0.00
-2.0	0.00	0.00	0.00	0.00	0.00
-1.5	0.00	0.00	0.00	0.00	0.00
-1.0	0.00	0.00	0.00	0.00	0.00
-0.5	0.00	0.00	0.00	0.00	0.00
0.0	0.00	0.00	0.00	0.00	0.00

Event Data (500 ms) (Record 1 - SIR Event Non-Frontal Deployment) - Table 23 of 23

Time (sec)	Steering Assist Request Type
-7.5	No Request
-7.0	No Request
-6.5	No Request
-6.0	No Request
-5.5	No Request
-5.0	No Request
-4.5	No Request
-4.0	No Request
-3.5	No Request
-3.0	No Request
-2.5	No Request
-2.0	No Request
-1.5	No Request
-1.0	No Request
-0.5	No Request
0.0	No Request

System Status at Event (Record 2 - FPB Alert Event)

UTC Date at Event	
UTC Time at Event	
GPS Latitudinal Position (degrees)	
GPS Longitudinal Position (degrees)	
Odometer (miles)	4780
ASCM Event Counter	36
ASCM Event Trigger Type	FPB Alert Event
Vehicle Speed (MPH)	6
Maximum Requested Acceleration (m/s^2)	0.00
Duration of Maximum Acceleration Request (Seconds)	0
FCA Gap Customer Setting	Far
LKA Customer Setting	Off
AEB Customer Setting	Alert and Brake
FPB Customer Setting	Alert and Brake
ACC Type Customer Setting	Enhanced Cruise Control
Lane Change on Demand Customer Setting	Lane Change on Demand and Automatic Lane Change
Data Write Complete	Write Complete

Event Data (Record 2 - FPB Alert Event) - Table 1 of 12

Time (sec)	Vehicle Speed Average Non-Driven (MPH)	Accelerator Pedal, % Full (%)	Steering Wheel Angle (deg)	Steering Wheel Angle Gradient (deg/sec)	Brake Pedal Capacity (%)
-4.9	11	10.20	275.942	-8.000	0
-4.8	11	10.59	274.813	-12.000	0
-4.7	11	10.59	272.870	-28.000	0
-4.6	11	10.59	268.625	-60.000	0
-4.5	11	10.59	262.053	-76.000	0
-4.4	11	10.59	253.991	-86.000	0
-4.3	11	10.59	245.364	-78.000	0
-4.2	11	10.59	238.431	-60.000	0
-4.1	11	10.59	232.627	-56.000	0
-4.0	11	10.59	227.004	-70.000	0
-3.9	11	10.59	220.184	-66.000	0
-3.8	11	10.59	213.296	-56.000	0
-3.7	11	10.59	208.554	-28.000	0
-3.6	11	10.59	206.296	-30.000	0
-3.5	11	10.59	202.186	-58.000	0
-3.4	11	10.59	195.366	-88.000	0
-3.3	11	10.20	186.423	-96.000	0
-3.2	11	9.41	177.435	-82.000	0
-3.1	12	9.02	169.734	-52.000	0
-3.0	12	9.02	165.624	-16.000	0
-2.9	12	8.63	164.675	2.000	0
-2.8	12	8.63	164.562	-2.000	0
-2.7	12	8.63	164.562	0.000	0
-2.6	12	8.24	164.562	0.000	0
-2.5	12	7.06	164.495	-6.000	0
-2.4	12	5.88	163.930	-18.000	0
-2.3	12	3.92	161.175	-48.000	0
-2.2	12	0.00	155.552	-68.000	0
-2.1	12	0.00	148.438	-74.000	0
-2.0	12	0.00	141.370	-66.000	0
-1.9	12	0.00	134.550	-74.000	0
-1.8	12	0.00	126.374	-98.000	0
-1.7	12	0.00	116.235	-122.000	0
-1.6	12	0.00	105.056	-116.000	0
-1.5	12	0.00	93.313	-134.000	0
-1.4	12	0.00	80.870	-134.000	0
-1.3	12	0.00	67.433	-136.000	0
-1.2	12	0.00	55.306	-106.000	0
-1.1	12	0.00	46.114	-72.000	0
-1.0	11	0.00	39.611	-56.000	2
-0.9	11	0.00	34.800	-40.000	6
-0.8	11	0.00	31.729	-10.000	7
-0.7	11	0.00	30.984	6.000	7
-0.6	11	0.00	30.984	-2.000	7
-0.5	11	0.00	31.052	0.000	7
-0.4	11	0.00	30.984	0.000	8
-0.3	11	0.00	30.984	-6.000	10
-0.2	11	0.00	30.735	0.000	10
-0.1	11	0.00	30.668	2.000	10
0.0	11	0.00	30.419	-2.000	10
0.1	11	0.00	30.374	0.000	12
0.2	11	0.00	31.368	34.000	15
0.3	11	0.00	34.733	36.000	15
0.4	10	0.00	37.104	6.000	17
0.5	10	0.00	37.420	-6.000	18
0.6	10	0.00	36.991	-20.000	18
0.7	10	0.00	35.229	-20.000	19
0.8	10	0.00	33.558	-10.000	21
0.9	10	0.00	32.429	-24.000	22

Time (sec)	Vehicle Speed Average Non-Driven (MPH)	Accelerator Pedal, % Full (%)	Steering Wheel Angle (deg)	Steering Wheel Angle Gradient (deg/sec)	Brake Pedal Capacity (%)
1.0	9	0.00	30.126	-44.000	22
1.1	9	0.00	25.428	-56.000	22
1.2	9	0.00	20.934	-6.000	22
1.3	9	0.00	20.686	-2.000	21
1.4	9	0.00	20.551	2.000	20
1.5	8	0.00	20.302	-16.000	20
1.6	8	0.00	18.676	-32.000	21
1.7	8	0.00	14.543	-52.000	23
1.8	8	0.00	9.666	-32.000	25
1.9	8	0.00	7.859	2.000	25
2.0	7	0.00	7.791	2.000	25
2.1	7	0.00	7.746	-4.000	24
2.2	7	0.00	7.498	-2.000	24
2.3	7	0.00	7.294	6.000	23
2.4	7	0.00	7.791	28.000	21
2.5	6	0.00	10.750	38.000	19
2.6	6	0.00	14.363	38.000	19
2.7	6	0.00	18.541	58.000	19
2.8	6	0.00	25.045	70.000	20
2.9	6	0.00	30.916	36.000	20
3.0	6	0.00	32.361	22.000	21

Event Data (Record 2 - FPB Alert Event) - Table 2 of 12

Time (sec)	ASCM Yaw Rate (deg/sec)	ASCM Lateral Acceleration (m/s^2)	ASCM Longitudinal Acceleration (m/s^2)	SDM Notification Event Status	ABS Active
-4.9	23.206	1.75	0.00	No Event	False
-4.8	22.867	2.00	0.00	No Event	False
-4.7	23.236	1.50	0.00	No Event	False
-4.6	23.323	1.25	0.00	No Event	False
-4.5	22.837	1.00	0.00	No Event	False
-4.4	22.241	1.25	0.25	No Event	False
-4.3	21.473	1.50	0.00	No Event	False
-4.2	20.761	1.50	0.00	No Event	False
-4.1	20.308	1.25	0.25	No Event	False
-4.0	19.879	1.00	0.25	No Event	False
-3.9	19.426	0.75	0.25	No Event	False
-3.8	19.170	0.75	0.25	No Event	False
-3.7	18.857	1.25	0.25	No Event	False
-3.6	17.945	1.25	0.25	No Event	False
-3.5	17.689	1.25	0.25	No Event	False
-3.4	17.606	1.25	0.25	No Event	False
-3.3	17.350	1.00	0.25	No Event	False
-3.2	16.751	0.75	0.25	No Event	False
-3.1	15.756	1.00	0.25	No Event	False
-3.0	15.017	0.75	0.25	No Event	False
-2.9	14.904	0.75	0.25	No Event	False
-2.8	15.074	1.00	0.25	No Event	False
-2.7	14.904	1.00	0.00	No Event	False
-2.6	14.961	1.25	0.00	No Event	False
-2.5	14.987	1.25	0.00	No Event	False
-2.4	14.931	1.25	0.00	No Event	False
-2.3	15.017	1.00	0.00	No Event	False
-2.2	14.874	1.00	0.00	No Event	False
-2.1	14.305	1.00	0.00	No Event	False
-2.0	13.623	0.75	0.00	No Event	False
-1.9	12.828	0.75	0.00	No Event	False
-1.8	12.172	0.75	0.00	No Event	False
-1.7	11.573	0.50	0.00	No Event	False
-1.6	10.692	0.25	0.00	No Event	False
-1.5	9.440	0.25	0.00	No Event	False
-1.4	8.276	0.00	0.00	No Event	False
-1.3	7.138	0.00	0.00	No Event	False
-1.2	5.973	0.00	0.00	No Event	False
-1.1	4.692	0.00	0.00	No Event	False
-1.0	3.810	0.00	0.00	No Event	False
-0.9	3.241	0.00	0.00	No Event	False
-0.8	2.872	0.00	0.00	No Event	False
-0.7	2.529	0.00	0.00	No Event	False
-0.6	2.359	0.00	0.00	No Event	False
-0.5	2.416	-0.25	0.00	No Event	False
-0.4	2.502	0.00	0.00	No Event	False
-0.3	2.416	0.00	0.00	No Event	False
-0.2	2.389	0.00	0.00	No Event	False
-0.1	2.273	0.00	0.00	No Event	False
0.0	2.216	0.00	0.00	No Event	False
0.1	2.359	0.00	0.00	No Event	False
0.2	2.446	0.00	0.00	No Event	False
0.3	2.303	0.00	-0.25	No Event	False
0.4	2.389	0.00	-0.25	No Event	False
0.5	2.815	0.00	-0.25	No Event	False
0.6	2.899	0.00	-0.25	No Event	False
0.7	2.702	0.00	-0.50	No Event	False
0.8	2.389	0.00	-0.50	No Event	False
0.9	2.246	0.00	-0.50	No Event	False

Time (sec)	ASCM Yaw Rate (deg/sec)	ASCM Lateral Acceleration (m/s^2)	ASCM Longitudinal Acceleration (m/s^2)	SDM Notification Event Status	ABS Active
1.0	2.160	0.00	-0.50	No Event	False
1.1	2.103	-0.25	-0.50	No Event	False
1.2	1.704	-0.25	-0.50	No Event	False
1.3	1.165	0.00	-0.50	No Event	False
1.4	1.135	0.00	-0.50	No Event	False
1.5	1.278	-0.25	-0.50	No Event	False
1.6	1.165	-0.25	-0.50	No Event	False
1.7	0.938	0.00	-0.50	No Event	False
1.8	0.795	-0.25	-0.75	No Event	False
1.9	0.539	-0.25	-0.75	No Event	False
2.0	0.226	-0.25	-0.75	No Event	False
2.1	0.197	-0.25	-0.75	No Event	False
2.2	0.313	0.00	-0.75	No Event	False
2.3	0.226	-0.25	-0.75	No Event	False
2.4	0.113	-0.25	-0.75	No Event	False
2.5	0.140	-0.25	-0.50	No Event	False
2.6	0.396	-0.25	-0.50	No Event	False
2.7	0.566	-0.25	-0.50	No Event	False
2.8	0.652	0.00	-0.50	No Event	False
2.9	0.879	0.00	-0.50	No Event	False
3.0	1.022	0.00	-0.50	No Event	False

Event Data (Record 2 - FPB Alert Event) - Table 3 of 12

Time (sec)	System Power Mode	AEB Operational Status	AEB Object Type	AEB Object Longitudinal Distance (m)	AEB Object Relative Longitudinal Velocity (m/s)
-4.9	Propulsion	Running	Unknown	199.68	0.00
-4.8	Propulsion	Running	Unknown	199.68	0.00
-4.7	Propulsion	Running	Unknown	199.68	0.00
-4.6	Propulsion	Running	Unknown	199.68	0.00
-4.5	Propulsion	Running	Unknown	199.68	0.00
-4.4	Propulsion	Running	Unknown	199.68	0.00
-4.3	Propulsion	Running	Unknown	199.68	0.00
-4.2	Propulsion	Running	Unknown	199.68	0.00
-4.1	Propulsion	Running	Unknown	199.68	0.00
-4.0	Propulsion	Running	Unknown	199.68	0.00
-3.9	Propulsion	Running	Unknown	199.68	0.00
-3.8	Propulsion	Running	Unknown	199.68	0.00
-3.7	Propulsion	Running	Unknown	199.68	0.00
-3.6	Propulsion	Running	Unknown	199.68	0.00
-3.5	Propulsion	Running	Unknown	199.68	0.00
-3.4	Propulsion	Running	Unknown	199.68	0.00
-3.3	Propulsion	Running	Unknown	199.68	0.00
-3.2	Propulsion	Running	Unknown	199.68	0.00
-3.1	Propulsion	Running	Unknown	199.68	0.00
-3.0	Propulsion	Running	Unknown	199.68	0.00
-2.9	Propulsion	Running	Unknown	199.68	0.00
-2.8	Propulsion	Running	Unknown	199.68	0.00
-2.7	Propulsion	Running	Unknown	199.68	0.00
-2.6	Propulsion	Running	Unknown	199.68	0.00
-2.5	Propulsion	Running	Unknown	199.68	0.00
-2.4	Propulsion	Running	Unknown	199.68	0.00
-2.3	Propulsion	Running	Unknown	199.68	0.00
-2.2	Propulsion	Running	Unknown	199.68	0.00
-2.1	Propulsion	Running	Unknown	199.68	0.00
-2.0	Propulsion	Running	Unknown	199.68	0.00
-1.9	Propulsion	Running	Unknown	199.68	0.00
-1.8	Propulsion	Running	Unknown	199.68	0.00
-1.7	Propulsion	Running	Unknown	199.68	0.00
-1.6	Propulsion	Running	Unknown	199.68	0.00
-1.5	Propulsion	Running	Unknown	199.68	0.00
-1.4	Propulsion	Running	Unknown	199.68	0.00
-1.3	Propulsion	Running	Unknown	199.68	0.00
-1.2	Propulsion	Running	Unknown	199.68	0.00
-1.1	Propulsion	Running	Unknown	199.68	0.00
-1.0	Propulsion	Running	Unknown	199.68	0.00
-0.9	Propulsion	Running	Unknown	199.68	0.00
-0.8	Propulsion	Running	Unknown	199.68	0.00
-0.7	Propulsion	Running	Unknown	199.68	0.00
-0.6	Propulsion	Running	Unknown	199.68	0.00
-0.5	Propulsion	Running	Unknown	199.68	0.00
-0.4	Propulsion	Running	Unknown	199.68	0.00
-0.3	Propulsion	Running	Unknown	199.68	0.00
-0.2	Propulsion	Running	Unknown	199.68	0.00
-0.1	Propulsion	Running	Unknown	199.68	0.00
0.0	Propulsion	Running	Unknown	199.68	0.00
0.1	Propulsion	Running	Unknown	199.68	0.00
0.2	Propulsion	Running	Unknown	199.68	0.00
0.3	Propulsion	Running	Unknown	199.68	0.00
0.4	Propulsion	Running	Unknown	199.68	0.00
0.5	Propulsion	Running	Unknown	199.68	0.00
0.6	Propulsion	Running	Unknown	199.68	0.00
0.7	Propulsion	Running	Unknown	199.68	0.00
0.8	Propulsion	Running	Unknown	199.68	0.00
0.9	Propulsion	Running	Unknown	199.68	0.00

Time (sec)	System Power Mode	AEB Operational Status	AEB Object Type	AEB Object Longitudinal Distance (m)	AEB Object Relative Longitudinal Velocity (m/s)
1.0	Propulsion	Running	Unknown	199.68	0.00
1.1	Propulsion	Running	Unknown	199.68	0.00
1.2	Propulsion	Running	Unknown	199.68	0.00
1.3	Propulsion	Running	Unknown	199.68	0.00
1.4	Propulsion	Running	Unknown	199.68	0.00
1.5	Propulsion	Running	Unknown	199.68	0.00
1.6	Propulsion	Running	Unknown	199.68	0.00
1.7	Propulsion	Running	Unknown	199.68	0.00
1.8	Propulsion	Running	Unknown	199.68	0.00
1.9	Propulsion	Running	Unknown	199.68	0.00
2.0	Propulsion	Running	Unknown	199.68	0.00
2.1	Propulsion	Running	Unknown	199.68	0.00
2.2	Propulsion	Running	Unknown	199.68	0.00
2.3	Propulsion	Running	Unknown	199.68	0.00
2.4	Propulsion	Running	Unknown	199.68	0.00
2.5	Propulsion	Running	Unknown	199.68	0.00
2.6	Propulsion	Running	Unknown	199.68	0.00
2.7	Propulsion	Running	Unknown	199.68	0.00
2.8	Propulsion	Running	Unknown	199.68	0.00
2.9	Propulsion	Running	Unknown	199.68	0.00
3.0	Propulsion	Running	Unknown	199.68	0.00

Event Data (Record 2 - FPB Alert Event) - Table 4 of 12

Time (sec)	AEB Object Relative Longitudinal Acceleration (m/s^2)	AEB Object Lateral Distance (m)	AEB Object Lateral Velocity (m/s)	Vehicle Ahead Indicator Request Status	Tailgate Alert Request Status
-4.9	0.00	19.93	0.00	Off	False
-4.8	0.00	19.93	0.00	Off	False
-4.7	0.00	19.93	0.00	Off	False
-4.6	0.00	19.93	0.00	Off	False
-4.5	0.00	19.93	0.00	Off	False
-4.4	0.00	19.93	0.00	Off	False
-4.3	0.00	19.93	0.00	Off	False
-4.2	0.00	19.93	0.00	Off	False
-4.1	0.00	19.93	0.00	Off	False
-4.0	0.00	19.93	0.00	Off	False
-3.9	0.00	19.93	0.00	Off	False
-3.8	0.00	19.93	0.00	Off	False
-3.7	0.00	19.93	0.00	Off	False
-3.6	0.00	19.93	0.00	Off	False
-3.5	0.00	19.93	0.00	Off	False
-3.4	0.00	19.93	0.00	Off	False
-3.3	0.00	19.93	0.00	Off	False
-3.2	0.00	19.93	0.00	Off	False
-3.1	0.00	19.93	0.00	Off	False
-3.0	0.00	19.93	0.00	Off	False
-2.9	0.00	19.93	0.00	Off	False
-2.8	0.00	19.93	0.00	Off	False
-2.7	0.00	19.93	0.00	Off	False
-2.6	0.00	19.93	0.00	Off	False
-2.5	0.00	19.93	0.00	Off	False
-2.4	0.00	19.93	0.00	Off	False
-2.3	0.00	19.93	0.00	Off	False
-2.2	0.00	19.93	0.00	Off	False
-2.1	0.00	19.93	0.00	Off	False
-2.0	0.00	19.93	0.00	Off	False
-1.9	0.00	19.93	0.00	Off	False
-1.8	0.00	19.93	0.00	Off	False
-1.7	0.00	19.93	0.00	Off	False
-1.6	0.00	19.93	0.00	Off	False
-1.5	0.00	19.93	0.00	Off	False
-1.4	0.00	19.93	0.00	Off	False
-1.3	0.00	19.93	0.00	Off	False
-1.2	0.00	19.93	0.00	Off	False
-1.1	0.00	19.93	0.00	Off	False
-1.0	0.00	19.93	0.00	Off	False
-0.9	0.00	19.93	0.00	Off	False
-0.8	0.00	19.93	0.00	Off	False
-0.7	0.00	19.93	0.00	Off	False
-0.6	0.00	19.93	0.00	Off	False
-0.5	0.00	19.93	0.00	Off	False
-0.4	0.00	19.93	0.00	Off	False
-0.3	0.00	19.93	0.00	Off	False
-0.2	0.00	19.93	0.00	Off	False
-0.1	0.00	19.93	0.00	Off	False
0.0	0.00	19.93	0.00	Off	False
0.1	0.00	19.93	0.00	Off	False
0.2	0.00	19.93	0.00	Off	False
0.3	0.00	19.93	0.00	Off	False
0.4	0.00	19.93	0.00	Off	False
0.5	0.00	19.93	0.00	Off	False
0.6	0.00	19.93	0.00	Off	False
0.7	0.00	19.93	0.00	Off	False
0.8	0.00	19.93	0.00	Off	False
0.9	0.00	19.93	0.00	Off	False

Time (sec)	AEB Object Relative Longitudinal Acceleration (m/s^2)	AEB Object Lateral Distance (m)	AEB Object Lateral Velocity (m/s)	Vehicle Ahead Indicator Request Status	Tailgate Alert Request Status
1.0	0.00	19.93	0.00	Off	False
1.1	0.00	19.93	0.00	Off	False
1.2	0.00	19.93	0.00	Off	False
1.3	0.00	19.93	0.00	Off	False
1.4	0.00	19.93	0.00	Off	False
1.5	0.00	19.93	0.00	Off	False
1.6	0.00	19.93	0.00	Off	False
1.7	0.00	19.93	0.00	Off	False
1.8	0.00	19.93	0.00	Off	False
1.9	0.00	19.93	0.00	Off	False
2.0	0.00	19.93	0.00	Off	False
2.1	0.00	19.93	0.00	Off	False
2.2	0.00	19.93	0.00	Off	False
2.3	0.00	19.93	0.00	Off	False
2.4	0.00	19.93	0.00	Off	False
2.5	0.00	19.93	0.00	Off	False
2.6	0.00	19.93	0.00	Off	False
2.7	0.00	19.93	0.00	Off	False
2.8	0.00	19.93	0.00	Off	False
2.9	0.00	19.93	0.00	Off	False
3.0	0.00	19.93	0.00	Off	False

Event Data (Record 2 - FPB Alert Event) - Table 5 of 12

Time (sec)	FCA Alert Request Status	AEB Brake Request Active	AEB Brake Request Type	AEB Braking Requested Acceleration (m/s^2)	AEB Axle Torque Request Active
-4.9	Off	False	None	0.00	False
-4.8	Off	False	None	0.00	False
-4.7	Off	False	None	0.00	False
-4.6	Off	False	None	0.00	False
-4.5	Off	False	None	0.00	False
-4.4	Off	False	None	0.00	False
-4.3	Off	False	None	0.00	False
-4.2	Off	False	None	0.00	False
-4.1	Off	False	None	0.00	False
-4.0	Off	False	None	0.00	False
-3.9	Off	False	None	0.00	False
-3.8	Off	False	None	0.00	False
-3.7	Off	False	None	0.00	False
-3.6	Off	False	None	0.00	False
-3.5	Off	False	None	0.00	False
-3.4	Off	False	None	0.00	False
-3.3	Off	False	None	0.00	False
-3.2	Off	False	None	0.00	False
-3.1	Off	False	None	0.00	False
-3.0	Off	False	None	0.00	False
-2.9	Off	False	None	0.00	False
-2.8	Off	False	None	0.00	False
-2.7	Off	False	None	0.00	False
-2.6	Off	False	None	0.00	False
-2.5	Off	False	None	0.00	False
-2.4	Off	False	None	0.00	False
-2.3	Off	False	None	0.00	False
-2.2	Off	False	None	0.00	False
-2.1	Off	False	None	0.00	False
-2.0	Off	False	None	0.00	False
-1.9	Off	False	None	0.00	False
-1.8	Off	False	None	0.00	False
-1.7	Off	False	None	0.00	False
-1.6	Off	False	None	0.00	False
-1.5	Off	False	None	0.00	False
-1.4	Off	False	None	0.00	False
-1.3	Off	False	None	0.00	False
-1.2	Off	False	None	0.00	False
-1.1	Off	False	None	0.00	False
-1.0	Off	False	None	0.00	False
-0.9	Off	False	None	0.00	False
-0.8	Off	False	None	0.00	False
-0.7	Off	False	None	0.00	False
-0.6	Off	False	None	0.00	False
-0.5	Off	False	None	0.00	False
-0.4	Off	False	None	0.00	False
-0.3	Off	False	None	0.00	False
-0.2	Off	False	None	0.00	False
-0.1	Off	False	None	0.00	False
0.0	Off	False	None	0.00	False
0.1	Off	False	None	0.00	False
0.2	Off	False	None	0.00	False
0.3	Off	False	None	0.00	False
0.4	Off	False	None	0.00	False
0.5	Off	False	None	0.00	False
0.6	Off	False	None	0.00	False
0.7	Off	False	None	0.00	False
0.8	Off	False	None	0.00	False
0.9	Off	False	None	0.00	False

Time (sec)	FCA Alert Request Status	AEB Brake Request Active	AEB Brake Request Type	AEB Braking Requested Acceleration (m/s^2)	AEB Axle Torque Request Active
1.0	Off	False	None	0.00	False
1.1	Off	False	None	0.00	False
1.2	Off	False	None	0.00	False
1.3	Off	False	None	0.00	False
1.4	Off	False	None	0.00	False
1.5	Off	False	None	0.00	False
1.6	Off	False	None	0.00	False
1.7	Off	False	None	0.00	False
1.8	Off	False	None	0.00	False
1.9	Off	False	None	0.00	False
2.0	Off	False	None	0.00	False
2.1	Off	False	None	0.00	False
2.2	Off	False	None	0.00	False
2.3	Off	False	None	0.00	False
2.4	Off	False	None	0.00	False
2.5	Off	False	None	0.00	False
2.6	Off	False	None	0.00	False
2.7	Off	False	None	0.00	False
2.8	Off	False	None	0.00	False
2.9	Off	False	None	0.00	False
3.0	Off	False	None	0.00	False

Event Data (Record 2 - FPB Alert Event) - Table 6 of 12

Time (sec)	FPB Warning Request Status	FPB Brake Request Active	FPB Brake Request Type	FPB Braking Requested Acceleration (m/s^2)	FPB Pedestrian Longitudinal Distance (m)
-4.9	None	False	None	0.00	100.40
-4.8	None	False	None	0.00	100.40
-4.7	None	False	None	0.00	100.40
-4.6	None	False	None	0.00	100.40
-4.5	None	False	None	0.00	100.40
-4.4	None	False	None	0.00	100.40
-4.3	None	False	None	0.00	100.40
-4.2	None	False	None	0.00	100.40
-4.1	None	False	None	0.00	100.40
-4.0	None	False	None	0.00	100.40
-3.9	None	False	None	0.00	100.40
-3.8	None	False	None	0.00	100.40
-3.7	None	False	None	0.00	100.40
-3.6	None	False	None	0.00	100.40
-3.5	None	False	None	0.00	100.40
-3.4	None	False	None	0.00	100.40
-3.3	None	False	None	0.00	100.40
-3.2	None	False	None	0.00	100.40
-3.1	None	False	None	0.00	100.40
-3.0	None	False	None	0.00	100.40
-2.9	None	False	None	0.00	100.40
-2.8	None	False	None	0.00	100.40
-2.7	None	False	None	0.00	100.40
-2.6	None	False	None	0.00	100.40
-2.5	None	False	None	0.00	100.40
-2.4	None	False	None	0.00	100.40
-2.3	None	False	None	0.00	100.40
-2.2	None	False	None	0.00	23.59
-2.1	None	False	None	0.00	23.09
-2.0	None	False	None	0.00	22.59
-1.9	None	False	None	0.00	22.09
-1.8	None	False	None	0.00	21.59
-1.7	None	False	None	0.00	21.08
-1.6	None	False	None	0.00	20.08
-1.5	None	False	None	0.00	19.58
-1.4	None	False	None	0.00	19.08
-1.3	None	False	None	0.00	18.07
-1.2	None	False	None	0.00	17.57
-1.1	None	False	None	0.00	17.07
-1.0	None	False	None	0.00	16.57
-0.9	None	False	None	0.00	15.56
-0.8	Pedestrian Detected	False	None	0.00	15.06
-0.7	Pedestrian Detected	False	None	0.00	14.56
-0.6	Pedestrian Detected	False	None	0.00	14.06
-0.5	Pedestrian Detected	False	None	0.00	13.05
-0.4	Pedestrian Detected	False	None	0.00	12.55
-0.3	Pedestrian Detected	False	None	0.00	12.05
-0.2	Pedestrian Detected	False	None	0.00	11.55
-0.1	Pedestrian Detected	False	None	0.00	11.04
0.0	Pedestrian Alert	False	None	0.00	10.54
0.1	Pedestrian Alert	False	None	0.00	10.04
0.2	Pedestrian Detected	False	None	0.00	10.04
0.3	Pedestrian Detected	False	None	0.00	9.54
0.4	Pedestrian Detected	False	None	0.00	9.04
0.5	Pedestrian Detected	False	None	0.00	8.53
0.6	Pedestrian Detected	False	None	0.00	12.05
0.7	Pedestrian Detected	False	None	0.00	7.53
0.8	Pedestrian Detected	False	None	0.00	7.53
0.9	Pedestrian Detected	False	None	0.00	7.03

Time (sec)	FPB Warning Request Status	FPB Brake Request Active	FPB Brake Request Type	FPB Braking Requested Acceleration (m/s^2)	FPB Pedestrian Longitudinal Distance (m)
1.0	Pedestrian Detected	False	None	0.00	6.53
1.1	Pedestrian Detected	False	None	0.00	6.02
1.2	None	False	None	0.00	5.52
1.3	None	False	None	0.00	5.02
1.4	None	False	None	0.00	4.52
1.5	None	False	None	0.00	4.52
1.6	None	False	None	0.00	4.02
1.7	None	False	None	0.00	8.03
1.8	None	False	None	0.00	7.53
1.9	None	False	None	0.00	7.03
2.0	None	False	None	0.00	7.03
2.1	Pedestrian Detected	False	None	0.00	6.53
2.2	Pedestrian Detected	False	None	0.00	6.53
2.3	Pedestrian Detected	False	None	0.00	6.02
2.4	Pedestrian Detected	False	None	0.00	6.02
2.5	Pedestrian Detected	False	None	0.00	5.52
2.6	Pedestrian Detected	False	None	0.00	5.52
2.7	Pedestrian Detected	False	None	0.00	5.02
2.8	Pedestrian Detected	False	None	0.00	5.02
2.9	Pedestrian Detected	False	None	0.00	100.40
3.0	Pedestrian Detected	False	None	0.00	100.40

Event Data (Record 2 - FPB Alert Event) - Table 7 of 12

Time (sec)	FPB Pedestrian Longitudinal Velocity (m/s)	FPB Pedestrian Longitudinal Acceleration (m/s^2)	FPB Pedestrian Lateral Distance (m)	FPB Pedestrian Lateral Velocity (m/s)	Driver Hand Detected on Steering Wheel
-4.9	0.00	0.00	15.94	0.00	On
-4.8	0.00	0.00	15.94	0.00	On
-4.7	0.00	0.00	15.94	0.00	On
-4.6	0.00	0.00	15.94	0.00	On
-4.5	0.00	0.00	15.94	0.00	On
-4.4	0.00	0.00	15.94	0.00	On
-4.3	0.00	0.00	15.94	0.00	On
-4.2	0.00	0.00	15.94	0.00	On
-4.1	0.00	0.00	15.94	0.00	On
-4.0	0.00	0.00	15.94	0.00	On
-3.9	0.00	0.00	15.94	0.00	On
-3.8	0.00	0.00	15.94	0.00	On
-3.7	0.00	0.00	15.94	0.00	On
-3.6	0.00	0.00	15.94	0.00	On
-3.5	0.00	0.00	15.94	0.00	On
-3.4	0.00	0.00	15.94	0.00	On
-3.3	0.00	0.00	15.94	0.00	On
-3.2	0.00	0.00	15.94	0.00	On
-3.1	0.00	0.00	15.94	0.00	On
-3.0	0.00	0.00	15.94	0.00	On
-2.9	0.00	0.00	15.94	0.00	On
-2.8	0.00	0.00	15.94	0.00	On
-2.7	0.00	0.00	15.94	0.00	On
-2.6	0.00	0.00	15.94	0.00	On
-2.5	0.00	0.00	15.94	0.00	On
-2.4	0.00	0.00	15.94	0.00	On
-2.3	0.00	0.00	15.94	0.00	On
-2.2	0.00	0.00	5.02	-6.15	On
-2.1	0.00	0.00	4.52	-6.15	On
-2.0	0.00	0.00	3.51	-6.28	On
-1.9	0.00	0.00	2.76	-6.15	On
-1.8	0.00	0.00	2.13	-5.90	On
-1.7	0.00	0.00	1.51	-5.52	On
-1.6	0.00	0.00	1.00	-5.02	On
-1.5	0.00	0.00	0.50	-4.52	On
-1.4	0.00	0.00	0.00	-3.89	On
-1.3	0.00	0.00	-0.13	-3.39	On
-1.2	0.00	0.00	-0.38	-2.76	On
-1.1	0.00	0.00	-0.63	-2.38	On
-1.0	0.00	0.24	-0.75	-2.01	On
-0.9	0.00	0.17	-0.88	-1.51	On
-0.8	0.00	0.16	-1.00	-1.13	On
-0.7	0.00	0.27	-1.00	-0.88	On
-0.6	0.00	0.38	-1.00	-0.75	On
-0.5	0.00	0.44	-1.00	-0.63	On
-0.4	0.00	0.46	-1.13	-0.50	On
-0.3	0.00	0.49	-1.13	-0.38	On
-0.2	0.00	0.58	-1.13	-0.38	On
-0.1	0.00	0.74	-1.26	-0.38	On
0.0	0.00	0.89	-1.26	-0.38	On
0.1	0.00	0.79	-1.26	-0.38	On
0.2	0.00	0.71	-1.26	-0.38	On
0.3	0.00	0.69	-1.38	-0.38	On
0.4	0.00	0.71	-1.51	-0.38	On
0.5	0.00	0.79	-1.51	-0.38	On
0.6	0.00	0.50	2.51	-0.50	On
0.7	0.00	0.00	-1.63	-0.25	On
0.8	0.00	0.11	-1.63	-0.38	On
0.9	0.00	0.28	-1.76	-0.25	On

Time (sec)	FPB Pedestrian Longitudinal Velocity (m/s)	FPB Pedestrian Longitudinal Acceleration (m/s^2)	FPB Pedestrian Lateral Distance (m)	FPB Pedestrian Lateral Velocity (m/s)	Driver Hand Detected on Steering Wheel
1.0	0.00	0.33	-1.76	-0.25	On
1.1	0.00	0.35	-1.76	-0.25	On
1.2	0.00	0.44	-1.76	-0.25	On
1.3	0.00	0.50	-1.88	-0.13	On
1.4	0.00	0.50	-1.88	-0.13	On
1.5	0.00	0.64	-1.88	0.00	On
1.6	0.00	0.77	-1.88	0.00	On
1.7	0.00	0.03	2.01	-0.38	On
1.8	0.00	0.38	1.88	-0.38	On
1.9	0.00	0.75	1.88	-0.25	On
2.0	0.00	0.94	1.88	-0.13	On
2.1	0.00	0.96	1.88	-0.13	On
2.2	0.00	0.96	1.88	0.00	On
2.3	0.00	0.93	2.01	0.00	On
2.4	0.00	0.96	2.01	0.00	On
2.5	0.00	0.94	2.01	0.00	On
2.6	0.00	0.91	2.01	0.00	On
2.7	0.00	0.75	2.01	0.00	On
2.8	0.00	0.68	2.01	0.00	On
2.9	0.00	0.00	15.94	0.00	On
3.0	0.00	0.00	15.94	0.00	On

Event Data (Record 2 - FPB Alert Event) - Table 8 of 12

Time (sec)	Driver Hand Detection Confidence Level	Left SBZA Telltale State	Right SBZA Telltale State	LDW and Control Feature State	LKA Requested Torque Type
-4.9	Low	Off	Off	Off	No Control
-4.8	Low	Off	Off	Off	No Control
-4.7	Low	Off	Off	Off	No Control
-4.6	Low	Off	Off	Off	No Control
-4.5	Low	Off	Off	Off	No Control
-4.4	Low	Off	Off	Off	No Control
-4.3	Low	Off	Off	Off	No Control
-4.2	Low	Off	Off	Off	No Control
-4.1	Low	Off	Off	Off	No Control
-4.0	Low	Off	Off	Off	No Control
-3.9	Low	Off	Off	Off	No Control
-3.8	Low	Off	Off	Off	No Control
-3.7	Low	Off	Off	Off	No Control
-3.6	Low	Off	Off	Off	No Control
-3.5	Low	Off	Off	Off	No Control
-3.4	Low	Off	Off	Off	No Control
-3.3	Low	Off	Off	Off	No Control
-3.2	Low	Off	Off	Off	No Control
-3.1	Low	Off	Off	Off	No Control
-3.0	Low	Off	Off	Off	No Control
-2.9	Low	Off	Off	Off	No Control
-2.8	Low	Off	Off	Off	No Control
-2.7	Low	Off	Off	Off	No Control
-2.6	Low	Off	Off	Off	No Control
-2.5	Low	Off	Off	Off	No Control
-2.4	Low	Off	Off	Off	No Control
-2.3	Low	Off	Off	Off	No Control
-2.2	Low	Off	Off	Off	No Control
-2.1	Low	Off	Off	Off	No Control
-2.0	Low	Off	Off	Off	No Control
-1.9	Low	Off	Off	Off	No Control
-1.8	Low	Off	Off	Off	No Control
-1.7	Low	Off	Off	Off	No Control
-1.6	Low	Off	Off	Off	No Control
-1.5	Low	Off	Off	Off	No Control
-1.4	Low	Off	Off	Off	No Control
-1.3	Low	Off	Off	Off	No Control
-1.2	Low	Off	Off	Off	No Control
-1.1	Low	Off	Off	Off	No Control
-1.0	Low	Off	Off	Off	No Control
-0.9	Low	Off	Off	Off	No Control
-0.8	Low	Off	Off	Off	No Control
-0.7	Low	Off	Off	Off	No Control
-0.6	Low	Off	Off	Off	No Control
-0.5	Low	Off	Off	Off	No Control
-0.4	Low	Off	Off	Off	No Control
-0.3	Low	Off	Off	Off	No Control
-0.2	Low	Off	Off	Off	No Control
-0.1	Low	Off	Off	Off	No Control
0.0	Low	Off	Off	Off	No Control
0.1	Low	Off	Off	Off	No Control
0.2	Low	Off	Off	Off	No Control
0.3	Low	Off	Off	Off	No Control
0.4	Low	Off	Off	Off	No Control
0.5	Low	Off	Off	Off	No Control
0.6	Low	Off	Off	Off	No Control
0.7	Low	Off	Off	Off	No Control
0.8	Low	Off	Off	Off	No Control
0.9	Low	Off	Off	Off	No Control

Time (sec)	Driver Hand Detection Confidence Level	Left SBZA Telltale State	Right SBZA Telltale State	LDW and Control Feature State	LKA Requested Torque Type
1.0	Low	Off	Off	Off	No Control
1.1	Low	Off	Off	Off	No Control
1.2	Low	Off	Off	Off	No Control
1.3	Low	Off	Off	Off	No Control
1.4	Low	Off	Off	Off	No Control
1.5	Low	Off	Off	Off	No Control
1.6	Low	Off	Off	Off	No Control
1.7	Low	Off	Off	Off	No Control
1.8	Low	Off	Off	Off	No Control
1.9	Low	Off	Off	Off	No Control
2.0	Low	Off	Off	Off	No Control
2.1	Low	Off	Off	Off	No Control
2.2	Low	Off	Off	Off	No Control
2.3	Low	Off	Off	Off	No Control
2.4	Low	Off	Off	Off	No Control
2.5	Low	Off	Off	Off	No Control
2.6	Low	Off	Off	Off	No Control
2.7	Low	Off	Off	Off	No Control
2.8	Low	Off	Off	Off	No Control
2.9	Low	Off	Off	Off	No Control
3.0	Low	Off	Off	Off	No Control

Event Data (Record 2 - FPB Alert Event) - Table 9 of 12

Time (sec)	LKA Visual Alert Request Status	Left Lane Marking Lateral Offset (m)	Right Lane Marking Lateral Offset (m)	ACC Axle Torque Request Active	ACC Brake Request Type
-4.9	Indicator Off	4.51	-0.80	False	No Braking
-4.8	Indicator Off	4.51	-0.80	False	No Braking
-4.7	Indicator Off	4.51	-0.80	False	No Braking
-4.6	Indicator Off	4.51	-0.80	False	No Braking
-4.5	Indicator Off	4.51	-0.80	False	No Braking
-4.4	Indicator Off	4.51	-0.80	False	No Braking
-4.3	Indicator Off	4.51	-0.80	False	No Braking
-4.2	Indicator Off	4.51	-0.80	False	No Braking
-4.1	Indicator Off	4.51	-0.80	False	No Braking
-4.0	Indicator Off	4.51	-0.80	False	No Braking
-3.9	Indicator Off	4.51	-0.80	False	No Braking
-3.8	Indicator Off	4.51	-0.80	False	No Braking
-3.7	Indicator Off	4.51	-0.80	False	No Braking
-3.6	Indicator Off	4.51	-0.80	False	No Braking
-3.5	Indicator Off	4.51	-0.80	False	No Braking
-3.4	Indicator Off	4.51	-0.80	False	No Braking
-3.3	Indicator Off	4.51	-0.80	False	No Braking
-3.2	Indicator Off	4.51	-0.80	False	No Braking
-3.1	Indicator Off	4.51	-0.80	False	No Braking
-3.0	Indicator Off	4.51	-0.80	False	No Braking
-2.9	Indicator Off	4.51	-0.80	False	No Braking
-2.8	Indicator Off	4.51	-0.80	False	No Braking
-2.7	Indicator Off	4.51	-0.80	False	No Braking
-2.6	Indicator Off	4.51	-0.80	False	No Braking
-2.5	Indicator Off	4.51	-0.80	False	No Braking
-2.4	Indicator Off	4.51	-0.80	False	No Braking
-2.3	Indicator Off	4.51	-0.80	False	No Braking
-2.2	Indicator Off	4.51	-0.80	False	No Braking
-2.1	Indicator Off	4.51	-0.80	False	No Braking
-2.0	Indicator Off	4.51	-0.80	False	No Braking
-1.9	Indicator Off	4.51	-0.80	False	No Braking
-1.8	Indicator Off	4.51	-0.80	False	No Braking
-1.7	Indicator Off	4.51	-0.80	False	No Braking
-1.6	Indicator Off	4.51	-0.80	False	No Braking
-1.5	Indicator Off	4.51	-0.80	False	No Braking
-1.4	Indicator Off	4.51	-0.80	False	No Braking
-1.3	Indicator Off	4.51	-0.80	False	No Braking
-1.2	Indicator Off	4.51	-0.80	False	No Braking
-1.1	Indicator Off	4.51	-0.80	False	No Braking
-1.0	Indicator Off	1.97	-1.84	False	No Braking
-0.9	Indicator Off	1.99	-1.79	False	No Braking
-0.8	Indicator Off	2.00	-1.73	False	No Braking
-0.7	Indicator Off	2.00	-1.69	False	No Braking
-0.6	Indicator Off	2.06	-1.65	False	No Braking
-0.5	Indicator Off	2.11	-1.65	False	No Braking
-0.4	Indicator Off	2.15	-1.61	False	No Braking
-0.3	Indicator Off	2.18	-1.61	False	No Braking
-0.2	Indicator Off	2.19	-1.58	False	No Braking
-0.1	Indicator Off	2.19	-1.56	False	No Braking
0.0	Indicator Off	2.21	-1.54	False	No Braking
0.1	Indicator Off	2.22	-1.54	False	No Braking
0.2	Indicator Off	2.23	-1.51	False	No Braking
0.3	Indicator Off	2.25	-1.50	False	No Braking
0.4	Indicator Off	2.25	-1.50	False	No Braking
0.5	Indicator Off	2.25	-1.50	False	No Braking
0.6	Indicator Off	2.25	-1.47	False	No Braking
0.7	Indicator Off	2.25	-1.47	False	No Braking
0.8	Indicator Off	2.25	-1.44	False	No Braking
0.9	Indicator Off	2.25	-1.43	False	No Braking

Time (sec)	LKA Visual Alert Request Status	Left Lane Marking Lateral Offset (m)	Right Lane Marking Lateral Offset (m)	ACC Axle Torque Request Active	ACC Brake Request Type
1.0	Indicator Off	2.23	-1.43	False	No Braking
1.1	Indicator Off	2.22	-1.41	False	No Braking
1.2	Indicator Off	2.22	-1.41	False	No Braking
1.3	Indicator Off	2.22	-1.41	False	No Braking
1.4	Indicator Off	2.20	-1.41	False	No Braking
1.5	Indicator Off	2.19	-1.41	False	No Braking
1.6	Indicator Off	2.16	-1.41	False	No Braking
1.7	Indicator Off	2.17	-1.41	False	No Braking
1.8	Indicator Off	2.16	-1.41	False	No Braking
1.9	Indicator Off	2.15	-1.41	False	No Braking
2.0	Indicator Off	2.15	-1.41	False	No Braking
2.1	Indicator Off	2.13	-1.41	False	No Braking
2.2	Indicator Off	2.13	-1.41	False	No Braking
2.3	Indicator Off	2.13	-1.41	False	No Braking
2.4	Indicator Off	2.11	-1.41	False	No Braking
2.5	Indicator Off	2.11	-1.41	False	No Braking
2.6	Indicator Off	2.09	-1.41	False	No Braking
2.7	Indicator Off	2.07	-1.41	False	No Braking
2.8	Indicator Off	2.06	-1.41	False	No Braking
2.9	Indicator Off	2.05	-1.41	False	No Braking
3.0	Indicator Off	2.05	-1.41	False	No Braking

Event Data (Record 2 - FPB Alert Event) - Table 10 of 12

Time (sec)	ACC Brake Request Active	ACC Braking Requested Acceleration (m/s^2)	LCC Driver Steering Detected	Steering Wheel Touch Zone 1	Steering Wheel Touch Zone 2
-4.9	False	0.0000	False	False	False
-4.8	False	0.0000	False	False	False
-4.7	False	0.0000	False	False	False
-4.6	False	0.0000	False	False	False
-4.5	False	0.0000	False	False	False
-4.4	False	0.0000	False	False	False
-4.3	False	0.0000	False	False	False
-4.2	False	0.0000	False	False	False
-4.1	False	0.0000	False	False	False
-4.0	False	0.0000	False	False	False
-3.9	False	0.0000	False	False	False
-3.8	False	0.0000	False	False	False
-3.7	False	0.0000	False	False	False
-3.6	False	0.0000	False	False	False
-3.5	False	0.0000	False	False	False
-3.4	False	0.0000	False	False	False
-3.3	False	0.0000	False	False	False
-3.2	False	0.0000	False	False	False
-3.1	False	0.0000	False	False	False
-3.0	False	0.0000	False	False	False
-2.9	False	0.0000	False	False	False
-2.8	False	0.0000	False	True	False
-2.7	False	0.0000	False	True	False
-2.6	False	0.0000	False	True	False
-2.5	False	0.0000	False	True	False
-2.4	False	0.0000	False	True	False
-2.3	False	0.0000	False	True	False
-2.2	False	0.0000	False	True	False
-2.1	False	0.0000	False	True	False
-2.0	False	0.0000	False	True	False
-1.9	False	0.0000	False	True	False
-1.8	False	0.0000	False	True	False
-1.7	False	0.0000	False	True	False
-1.6	False	0.0000	False	True	False
-1.5	False	0.0000	False	True	False
-1.4	False	0.0000	False	False	False
-1.3	False	0.0000	False	False	False
-1.2	False	0.0000	False	False	False
-1.1	False	0.0000	False	False	False
-1.0	False	0.0000	False	False	False
-0.9	False	0.0000	False	False	False
-0.8	False	0.0000	False	False	True
-0.7	False	0.0000	False	False	True
-0.6	False	0.0000	False	False	True
-0.5	False	0.0000	False	False	True
-0.4	False	0.0000	False	False	True
-0.3	False	0.0000	False	False	True
-0.2	False	0.0000	False	False	True
-0.1	False	0.0000	False	False	True
0.0	False	0.0000	False	False	True
0.1	False	0.0000	False	False	True
0.2	False	0.0000	False	False	True
0.3	False	0.0000	False	False	True
0.4	False	0.0000	False	False	True
0.5	False	0.0000	False	False	True
0.6	False	0.0000	False	False	True
0.7	False	0.0000	False	False	True
0.8	False	0.0000	False	False	True
0.9	False	0.0000	False	False	True

Time (sec)	ACC Brake Request Active	ACC Braking Requested Acceleration (m/s^2)	LCC Driver Steering Detected	Steering Wheel Touch Zone 1	Steering Wheel Touch Zone 2
1.0	False	0.0000	False	False	True
1.1	False	0.0000	False	False	False
1.2	False	0.0000	False	False	False
1.3	False	0.0000	False	False	False
1.4	False	0.0000	False	False	False
1.5	False	0.0000	False	False	False
1.6	False	0.0000	False	False	False
1.7	False	0.0000	False	False	False
1.8	False	0.0000	False	True	False
1.9	False	0.0000	False	True	False
2.0	False	0.0000	False	True	False
2.1	False	0.0000	False	True	False
2.2	False	0.0000	False	True	False
2.3	False	0.0000	False	True	False
2.4	False	0.0000	False	True	False
2.5	False	0.0000	False	True	False
2.6	False	0.0000	False	True	False
2.7	False	0.0000	False	True	False
2.8	False	0.0000	False	True	False
2.9	False	0.0000	False	True	False
3.0	False	0.0000	False	True	False

Event Data (Record 2 - FPB Alert Event) - Table 11 of 12

Time (sec)	Steering Wheel Touch Zone 3	Driver Attention State	LCC Visual Warning Request Status	LCC Visual Alert Request Status	LCC Light Bar Request Status
-4.9	False	Unknown	No Indication	Off	Off
-4.8	False	Unknown	No Indication	Off	Off
-4.7	False	Unknown	No Indication	Off	Off
-4.6	False	Unknown	No Indication	Off	Off
-4.5	False	Unknown	No Indication	Off	Off
-4.4	False	Unknown	No Indication	Off	Off
-4.3	False	Unknown	No Indication	Off	Off
-4.2	False	Unknown	No Indication	Off	Off
-4.1	False	Unknown	No Indication	Off	Off
-4.0	False	Unknown	No Indication	Off	Off
-3.9	False	Unknown	No Indication	Off	Off
-3.8	False	Unknown	No Indication	Off	Off
-3.7	False	Unknown	No Indication	Off	Off
-3.6	False	Unknown	No Indication	Off	Off
-3.5	False	Unknown	No Indication	Off	Off
-3.4	False	Unknown	No Indication	Off	Off
-3.3	False	Unknown	No Indication	Off	Off
-3.2	False	Unknown	No Indication	Off	Off
-3.1	False	Unknown	No Indication	Off	Off
-3.0	False	Unknown	No Indication	Off	Off
-2.9	False	Unknown	No Indication	Off	Off
-2.8	False	Unknown	No Indication	Off	Off
-2.7	False	Unknown	No Indication	Off	Off
-2.6	False	Unknown	No Indication	Off	Off
-2.5	False	Unknown	No Indication	Off	Off
-2.4	False	Unknown	No Indication	Off	Off
-2.3	False	Unknown	No Indication	Off	Off
-2.2	False	Unknown	No Indication	Off	Off
-2.1	False	Unknown	No Indication	Off	Off
-2.0	False	Unknown	No Indication	Off	Off
-1.9	False	Unknown	No Indication	Off	Off
-1.8	False	Unknown	No Indication	Off	Off
-1.7	False	Unknown	No Indication	Off	Off
-1.6	False	Unknown	No Indication	Off	Off
-1.5	False	Unknown	No Indication	Off	Off
-1.4	False	Unknown	No Indication	Off	Off
-1.3	False	Unknown	No Indication	Off	Off
-1.2	False	Unknown	No Indication	Off	Off
-1.1	False	Unknown	No Indication	Off	Off
-1.0	False	Unknown	No Indication	Off	Off
-0.9	False	Unknown	No Indication	Off	Off
-0.8	False	Unknown	No Indication	Off	Off
-0.7	False	Unknown	No Indication	Off	Off
-0.6	False	Unknown	No Indication	Off	Off
-0.5	False	Unknown	No Indication	Off	Off
-0.4	False	Unknown	No Indication	Off	Off
-0.3	False	Unknown	No Indication	Off	Off
-0.2	False	Unknown	No Indication	Off	Off
-0.1	False	Unknown	No Indication	Off	Off
0.0	False	Unknown	No Indication	Off	Off
0.1	False	Unknown	No Indication	Off	Off
0.2	False	Unknown	No Indication	Off	Off
0.3	False	Unknown	No Indication	Off	Off
0.4	False	Unknown	No Indication	Off	Off
0.5	False	Unknown	No Indication	Off	Off
0.6	False	Unknown	No Indication	Off	Off
0.7	False	Unknown	No Indication	Off	Off
0.8	False	Unknown	No Indication	Off	Off
0.9	False	Unknown	No Indication	Off	Off

Time (sec)	Steering Wheel Touch Zone 3	Driver Attention State	LCC Visual Warning Request Status	LCC Visual Alert Request Status	LCC Light Bar Request Status
1.0	False	On Road	No Indication	Off	Off
1.1	False	Unknown	No Indication	Off	Off
1.2	False	Unknown	No Indication	Off	Off
1.3	False	Unknown	No Indication	Off	Off
1.4	False	Unknown	No Indication	Off	Off
1.5	False	Unknown	No Indication	Off	Off
1.6	False	Unknown	No Indication	Off	Off
1.7	False	Unknown	No Indication	Off	Off
1.8	False	Unknown	No Indication	Off	Off
1.9	False	Unknown	No Indication	Off	Off
2.0	False	Unknown	No Indication	Off	Off
2.1	False	Unknown	No Indication	Off	Off
2.2	False	Unknown	No Indication	Off	Off
2.3	False	Unknown	No Indication	Off	Off
2.4	False	Unknown	No Indication	Off	Off
2.5	False	Unknown	No Indication	Off	Off
2.6	False	Unknown	No Indication	Off	Off
2.7	False	Unknown	No Indication	Off	Off
2.8	False	Unknown	No Indication	Off	Off
2.9	False	Unknown	No Indication	Off	Off
3.0	False	Unknown	No Indication	Off	Off

Event Data (Record 2 - FPB Alert Event) - Table 12 of 12

Time (sec)	LCC Light Bar Flash Rate	Lane Change Request State	LCC Steering Request Active
-4.9	None	No Lane Change Requested	False
-4.8	None	No Lane Change Requested	False
-4.7	None	No Lane Change Requested	False
-4.6	None	No Lane Change Requested	False
-4.5	None	No Lane Change Requested	False
-4.4	None	No Lane Change Requested	False
-4.3	None	No Lane Change Requested	False
-4.2	None	No Lane Change Requested	False
-4.1	None	No Lane Change Requested	False
-4.0	None	No Lane Change Requested	False
-3.9	None	No Lane Change Requested	False
-3.8	None	No Lane Change Requested	False
-3.7	None	No Lane Change Requested	False
-3.6	None	No Lane Change Requested	False
-3.5	None	No Lane Change Requested	False
-3.4	None	No Lane Change Requested	False
-3.3	None	No Lane Change Requested	False
-3.2	None	No Lane Change Requested	False
-3.1	None	No Lane Change Requested	False

Time (sec)	LCC Light Bar Flash Rate	Lane Change Request State	LCC Steering Request Active
-3.0	None	No Lane Change Requested	False
-2.9	None	No Lane Change Requested	False
-2.8	None	No Lane Change Requested	False
-2.7	None	No Lane Change Requested	False
-2.6	None	No Lane Change Requested	False
-2.5	None	No Lane Change Requested	False
-2.4	None	No Lane Change Requested	False
-2.3	None	No Lane Change Requested	False
-2.2	None	No Lane Change Requested	False
-2.1	None	No Lane Change Requested	False
-2.0	None	No Lane Change Requested	False
-1.9	None	No Lane Change Requested	False
-1.8	None	No Lane Change Requested	False
-1.7	None	No Lane Change Requested	False
-1.6	None	No Lane Change Requested	False
-1.5	None	No Lane Change Requested	False
-1.4	None	No Lane Change Requested	False
-1.3	None	No Lane Change Requested	False
-1.2	None	No Lane Change Requested	False
-1.1	None	No Lane Change Requested	False

Time (sec)	LCC Light Bar Flash Rate	Lane Change Request State	LCC Steering Request Active
-1.0	None	No Lane Change Requested	False
-0.9	None	No Lane Change Requested	False
-0.8	None	No Lane Change Requested	False
-0.7	None	No Lane Change Requested	False
-0.6	None	No Lane Change Requested	False
-0.5	None	No Lane Change Requested	False
-0.4	None	No Lane Change Requested	False
-0.3	None	No Lane Change Requested	False
-0.2	None	No Lane Change Requested	False
-0.1	None	No Lane Change Requested	False
0.0	None	No Lane Change Requested	False
0.1	None	No Lane Change Requested	False
0.2	None	No Lane Change Requested	False
0.3	None	No Lane Change Requested	False
0.4	None	No Lane Change Requested	False
0.5	None	No Lane Change Requested	False
0.6	None	No Lane Change Requested	False
0.7	None	No Lane Change Requested	False
0.8	None	No Lane Change Requested	False
0.9	None	No Lane Change Requested	False

Time (sec)	LCC Light Bar Flash Rate	Lane Change Request State	LCC Steering Request Active
1.0	None	No Lane Change Requested	False
1.1	None	No Lane Change Requested	False
1.2	None	No Lane Change Requested	False
1.3	None	No Lane Change Requested	False
1.4	None	No Lane Change Requested	False
1.5	None	No Lane Change Requested	False
1.6	None	No Lane Change Requested	False
1.7	None	No Lane Change Requested	False
1.8	None	No Lane Change Requested	False
1.9	None	No Lane Change Requested	False
2.0	None	No Lane Change Requested	False
2.1	None	No Lane Change Requested	False
2.2	None	No Lane Change Requested	False
2.3	None	No Lane Change Requested	False
2.4	None	No Lane Change Requested	False
2.5	None	No Lane Change Requested	False
2.6	None	No Lane Change Requested	False
2.7	None	No Lane Change Requested	False
2.8	None	No Lane Change Requested	False
2.9	None	No Lane Change Requested	False

Time (sec)	LCC Light Bar Flash Rate	Lane Change Request State	LCC Steering Request Active
3.0	None	No Lane Change Requested	False

Event Data (500 ms) (Record 2 - FPB Alert Event) - Table 1 of 23

Time (sec)	Transmission Estimated Gear	Engine RPM (Engine Speed) (rpm)	Vehicle Motion Movement State	Logistics Mode Active	Turn Signal Switch Active
-4.5	Gear 3	1,168	Forward	False	None
-4.0	Gear 3	1,221	Forward	False	None
-3.5	Gear 3	1,231	Forward	False	None
-3.0	Gear 3	1,163	Forward	False	None
-2.5	Gear 3	1,081	Forward	False	None
-2.0	Gear 3	891	Forward	False	None
-1.5	Gear 3	901	Forward	False	None
-1.0	Gear 3	843	Forward	False	None
-0.5	Gear 3	820	Forward	False	None
0.0	Gear 3	775	Forward	False	None
0.5	Gear 3	732	Forward	False	None
1.0	Gear 2	702	Forward	False	None
1.5	Gear 2	712	Forward	False	None
2.0	Gear 2	706	Forward	False	None
2.5	Gear 2	825	Forward	False	None
3.0	Gear 2	786	Forward	False	None

Event Data (500 ms) (Record 2 - FPB Alert Event) - Table 2 of 23

Time (sec)	Teen Driver Mode Active	SDM Event Enabled	Driver Selected Trailer Present	Electronic Stability Control Status	Electronic Stability Control Active
-4.5	False	False	False	Normal Operation	False
-4.0	False	False	False	Normal Operation	False
-3.5	False	False	False	Normal Operation	False
-3.0	False	False	False	Normal Operation	False
-2.5	False	False	False	Normal Operation	False
-2.0	False	False	False	Normal Operation	False
-1.5	False	False	False	Normal Operation	False
-1.0	False	False	False	Normal Operation	False
-0.5	False	False	False	Normal Operation	False
0.0	False	False	False	Normal Operation	False
0.5	False	False	False	Normal Operation	False
1.0	False	False	False	Normal Operation	False
1.5	False	False	False	Normal Operation	False
2.0	False	False	False	Normal Operation	False
2.5	False	False	False	Normal Operation	False
3.0	False	False	False	Normal Operation	False

Event Data (500 ms) (Record 2 - FPB Alert Event) - Table 3 of 23

Time (sec)	Park Brake System Status	FCA Driver Inhibit Active	Forward Collision System Off Request Status	AEB System Off Request Status	FCA Enable Status
-4.5	Released	True	False	False	True
-4.0	Released	False	False	False	True
-3.5	Released	False	False	False	True
-3.0	Released	False	False	False	True
-2.5	Released	False	False	False	True
-2.0	Released	False	False	False	True
-1.5	Released	False	False	False	True
-1.0	Released	False	False	False	True
-0.5	Released	True	False	False	True
0.0	Released	True	False	False	True
0.5	Released	True	False	False	True
1.0	Released	True	False	False	True
1.5	Released	True	False	False	True
2.0	Released	True	False	False	True
2.5	Released	True	False	False	True
3.0	Released	True	False	False	True

Event Data (500 ms) (Record 2 - FPB Alert Event) - Table 4 of 23

Time (sec)	Forward Collision System Unavailable Request Status	AEB Driver Inhibit Active	AEB Driver Override Active	AEB Enable Status	FPB Driver Inhibit Active
-4.5	False	AEB	False	True	True
-4.0	False	AEB	False	True	True
-3.5	False	AEB	False	True	True
-3.0	False	AEB	False	True	True
-2.5	False	None	False	True	False
-2.0	False	None	False	True	False
-1.5	False	None	False	True	False
-1.0	False	None	False	True	False
-0.5	False	None	False	True	False
0.0	False	None	False	True	False
0.5	False	None	False	True	False
1.0	False	None	False	True	False
1.5	False	AEB	False	True	True
2.0	False	AEB	False	True	True
2.5	False	AEB	False	True	True
3.0	False	AEB	False	True	True

Event Data (500 ms) (Record 2 - FPB Alert Event) - Table 5 of 23

Time (sec)	FPB Driver Override Active	FPB Enable Status	LKA Customer Setting	LKA Driver Inhibit Active	LKA Driver Override Active
-4.5	False	True	Off	True	False
-4.0	False	True	Off	True	False
-3.5	False	True	Off	True	False
-3.0	False	True	Off	True	False
-2.5	False	True	Off	True	False
-2.0	False	True	Off	True	False
-1.5	False	True	Off	True	False
-1.0	False	True	Off	True	False
-0.5	False	True	Off	True	False
0.0	False	True	Off	True	False
0.5	False	True	Off	True	False
1.0	False	True	Off	True	False
1.5	False	True	Off	True	False
2.0	False	True	Off	True	False
2.5	False	True	Off	True	False
3.0	False	True	Off	True	False

Event Data (500 ms) (Record 2 - FPB Alert Event) - Table 6 of 23

Time (sec)	Construction Area Detection Status	Driver Attention Operational Status	Driver Attention Confidence Level	ACC Go Notifier Active	LCC HMI Alert Request Status
-4.5	False	Unknown	0	Not Stopped	Off
-4.0	False	Unknown	0	Not Stopped	Off
-3.5	False	Unknown	0	Not Stopped	Off
-3.0	False	Unknown	0	Not Stopped	Off
-2.5	False	Unknown	0	Not Stopped	Off
-2.0	False	Unknown	0	Not Stopped	Off
-1.5	False	Unknown	0	Not Stopped	Off
-1.0	False	Unknown	0	Not Stopped	Off
-0.5	False	Unknown	0	Not Stopped	Off
0.0	False	Unknown	0	Not Stopped	Off
0.5	False	Unknown	0	Not Stopped	Off
1.0	False	Unknown	0	Not Stopped	Off
1.5	False	Unknown	0	Not Stopped	Off
2.0	False	Unknown	0	Not Stopped	Off
2.5	False	Unknown	0	Not Stopped	Off
3.0	False	Unknown	0	Not Stopped	Off

Event Data (500 ms) (Record 2 - FPB Alert Event) - Table 7 of 23

Time (sec)	Left Lane Location 0 ID	Left Lane Location 1 ID	Left Lane Location 2 ID	Left Lane Location 3 ID	Left Lane Location 4 ID
-4.5	0	0	0	0	0
-4.0	0	0	0	0	0
-3.5	0	0	0	0	0
-3.0	0	0	0	0	0
-2.5	0	0	0	0	0
-2.0	0	0	0	0	0
-1.5	0	0	0	0	0
-1.0	0	0	0	0	0
-0.5	0	0	0	0	0
0.0	0	0	0	0	0
0.5	0	0	0	0	0
1.0	0	0	0	0	0
1.5	0	0	0	0	0
2.0	0	0	0	0	0
2.5	0	0	0	0	0
3.0	0	0	0	0	0

Event Data (500 ms) (Record 2 - FPB Alert Event) - Table 8 of 23

Time (sec)	Left Lane Location 5 ID	Left Lane Location 6 ID	Left Lane Location 7 ID	Right Lane Location 0 ID	Right Lane Location 1 ID
-4.5	0	0	0	0	0
-4.0	0	0	0	0	0
-3.5	0	0	0	0	0
-3.0	0	0	0	0	0
-2.5	0	0	0	0	0
-2.0	0	0	0	0	0
-1.5	0	0	0	0	0
-1.0	0	0	0	0	0
-0.5	0	0	0	0	0
0.0	0	0	0	0	0
0.5	0	0	0	0	0
1.0	0	0	0	0	0
1.5	0	0	0	0	0
2.0	0	0	0	0	0
2.5	0	0	0	0	0
3.0	0	0	0	0	0

Event Data (500 ms) (Record 2 - FPB Alert Event) - Table 9 of 23

Time (sec)	Right Lane Location 2 ID	Right Lane Location 3 ID	Right Lane Location 4 ID	Right Lane Location 5 ID	Right Lane Location 6 ID
-4.5	0	0	0	0	0
-4.0	0	0	0	0	0
-3.5	0	0	0	0	0
-3.0	0	0	0	0	0
-2.5	0	0	0	0	0
-2.0	0	0	0	0	0
-1.5	0	0	0	0	0
-1.0	0	0	0	0	0
-0.5	0	0	0	0	0
0.0	0	0	0	0	0
0.5	0	0	0	0	0
1.0	0	0	0	0	0
1.5	0	0	0	0	0
2.0	0	0	0	0	0
2.5	0	0	0	0	0
3.0	0	0	0	0	0

Event Data (500 ms) (Record 2 - FPB Alert Event) - Table 10 of 23

Time (sec)	Right Lane Location 7 ID	Left Lane Location 0 Type	Left Lane Location 1 Type	Left Lane Location 2 Type	Left Lane Location 3 Type
-4.5	0	Unknown	Unknown	Unknown	Unknown
-4.0	0	Unknown	Unknown	Unknown	Unknown
-3.5	0	Unknown	Unknown	Unknown	Unknown
-3.0	0	Unknown	Unknown	Unknown	Unknown
-2.5	0	Unknown	Unknown	Unknown	Unknown
-2.0	0	Unknown	Unknown	Unknown	Unknown
-1.5	0	Unknown	Unknown	Unknown	Unknown
-1.0	0	Unknown	Unknown	Unknown	Unknown
-0.5	0	Unknown	Unknown	Unknown	Unknown
0.0	0	Unknown	Unknown	Unknown	Unknown
0.5	0	Unknown	Unknown	Unknown	Unknown
1.0	0	Unknown	Unknown	Unknown	Unknown
1.5	0	Unknown	Unknown	Unknown	Unknown
2.0	0	Unknown	Unknown	Unknown	Unknown
2.5	0	Unknown	Unknown	Unknown	Unknown
3.0	0	Unknown	Unknown	Unknown	Unknown

Event Data (500 ms) (Record 2 - FPB Alert Event) - Table 11 of 23

Time (sec)	Left Lane Location 4 Type	Left Lane Location 5 Type	Left Lane Location 6 Type	Left Lane Location 7 Type	Right Lane Location 0 Type
-4.5	Unknown	Unknown	Unknown	Unknown	Unknown
-4.0	Unknown	Unknown	Unknown	Unknown	Unknown
-3.5	Unknown	Unknown	Unknown	Unknown	Unknown
-3.0	Unknown	Unknown	Unknown	Unknown	Unknown
-2.5	Unknown	Unknown	Unknown	Unknown	Unknown
-2.0	Unknown	Unknown	Unknown	Unknown	Unknown
-1.5	Unknown	Unknown	Unknown	Unknown	Unknown
-1.0	Unknown	Unknown	Unknown	Unknown	Unknown
-0.5	Unknown	Unknown	Unknown	Unknown	Unknown
0.0	Unknown	Unknown	Unknown	Unknown	Unknown
0.5	Unknown	Unknown	Unknown	Unknown	Unknown
1.0	Unknown	Unknown	Unknown	Unknown	Unknown
1.5	Unknown	Unknown	Unknown	Unknown	Unknown
2.0	Unknown	Unknown	Unknown	Unknown	Unknown
2.5	Unknown	Unknown	Unknown	Unknown	Unknown
3.0	Unknown	Unknown	Unknown	Unknown	Unknown

Event Data (500 ms) (Record 2 - FPB Alert Event) - Table 12 of 23

Time (sec)	Right Lane Location 1 Type	Right Lane Location 2 Type	Right Lane Location 3 Type	Right Lane Location 4 Type	Right Lane Location 5 Type
-4.5	Unknown	Unknown	Unknown	Unknown	Unknown
-4.0	Unknown	Unknown	Unknown	Unknown	Unknown
-3.5	Unknown	Unknown	Unknown	Unknown	Unknown
-3.0	Unknown	Unknown	Unknown	Unknown	Unknown
-2.5	Unknown	Unknown	Unknown	Unknown	Unknown
-2.0	Unknown	Unknown	Unknown	Unknown	Unknown
-1.5	Unknown	Unknown	Unknown	Unknown	Unknown
-1.0	Unknown	Unknown	Unknown	Unknown	Unknown
-0.5	Unknown	Unknown	Unknown	Unknown	Unknown
0.0	Unknown	Unknown	Unknown	Unknown	Unknown
0.5	Unknown	Unknown	Unknown	Unknown	Unknown
1.0	Unknown	Unknown	Unknown	Unknown	Unknown
1.5	Unknown	Unknown	Unknown	Unknown	Unknown
2.0	Unknown	Unknown	Unknown	Unknown	Unknown
2.5	Unknown	Unknown	Unknown	Unknown	Unknown
3.0	Unknown	Unknown	Unknown	Unknown	Unknown

Event Data (500 ms) (Record 2 - FPB Alert Event) - Table 13 of 23

Time (sec)	Right Lane Location 6 Type	Right Lane Location 7 Type	Left Lane Location 0 Longitudinal Distance (m)	Left Lane Location 1 Longitudinal Distance (m)	Left Lane Location 2 Longitudinal Distance (m)
-4.5	Unknown	Unknown	199.98	199.98	199.98
-4.0	Unknown	Unknown	199.98	199.98	199.98
-3.5	Unknown	Unknown	199.98	199.98	199.98
-3.0	Unknown	Unknown	199.98	199.98	199.98
-2.5	Unknown	Unknown	199.98	199.98	199.98
-2.0	Unknown	Unknown	199.98	199.98	199.98
-1.5	Unknown	Unknown	199.98	199.98	199.98
-1.0	Unknown	Unknown	199.98	199.98	199.98
-0.5	Unknown	Unknown	199.98	199.98	199.98
0.0	Unknown	Unknown	199.98	199.98	199.98
0.5	Unknown	Unknown	199.98	199.98	199.98
1.0	Unknown	Unknown	199.98	199.98	199.98
1.5	Unknown	Unknown	199.98	199.98	199.98
2.0	Unknown	Unknown	199.98	199.98	199.98
2.5	Unknown	Unknown	199.98	199.98	199.98
3.0	Unknown	Unknown	199.98	199.98	199.98

Event Data (500 ms) (Record 2 - FPB Alert Event) - Table 14 of 23

Time (sec)	Left Lane Location 3 Longitudinal Distance (m)	Left Lane Location 4 Longitudinal Distance (m)	Left Lane Location 5 Longitudinal Distance (m)	Left Lane Location 6 Longitudinal Distance (m)	Left Lane Location 7 Longitudinal Distance (m)
-4.5	199.98	199.98	199.98	199.98	199.98
-4.0	199.98	199.98	199.98	199.98	199.98
-3.5	199.98	199.98	199.98	199.98	199.98
-3.0	199.98	199.98	199.98	199.98	199.98
-2.5	199.98	199.98	199.98	199.98	199.98
-2.0	199.98	199.98	199.98	199.98	199.98
-1.5	199.98	199.98	199.98	199.98	199.98
-1.0	199.98	199.98	199.98	199.98	199.98
-0.5	199.98	199.98	199.98	199.98	199.98
0.0	199.98	199.98	199.98	199.98	199.98
0.5	199.98	199.98	199.98	199.98	199.98
1.0	199.98	199.98	199.98	199.98	199.98
1.5	199.98	199.98	199.98	199.98	199.98
2.0	199.98	199.98	199.98	199.98	199.98
2.5	199.98	199.98	199.98	199.98	199.98
3.0	199.98	199.98	199.98	199.98	199.98

Event Data (500 ms) (Record 2 - FPB Alert Event) - Table 15 of 23

Time (sec)	Right Lane Location 0 Longitudinal Distance (m)	Right Lane Location 1 Longitudinal Distance (m)	Right Lane Location 2 Longitudinal Distance (m)	Right Lane Location 3 Longitudinal Distance (m)	Right Lane Location 4 Longitudinal Distance (m)
-4.5	199.98	199.98	199.98	199.98	199.98
-4.0	199.98	199.98	199.98	199.98	199.98
-3.5	199.98	199.98	199.98	199.98	199.98
-3.0	199.98	199.98	199.98	199.98	199.98
-2.5	199.98	199.98	199.98	199.98	199.98
-2.0	199.98	199.98	199.98	199.98	199.98
-1.5	199.98	199.98	199.98	199.98	199.98
-1.0	199.98	199.98	199.98	199.98	199.98
-0.5	199.98	199.98	199.98	199.98	199.98
0.0	199.98	199.98	199.98	199.98	199.98
0.5	199.98	199.98	199.98	199.98	199.98
1.0	199.98	199.98	199.98	199.98	199.98
1.5	199.98	199.98	199.98	199.98	199.98
2.0	199.98	199.98	199.98	199.98	199.98
2.5	199.98	199.98	199.98	199.98	199.98
3.0	199.98	199.98	199.98	199.98	199.98

Event Data (500 ms) (Record 2 - FPB Alert Event) - Table 16 of 23

Time (sec)	Right Lane Location 5 Longitudinal Distance (m)	Right Lane Location 6 Longitudinal Distance (m)	Right Lane Location 7 Longitudinal Distance (m)	Left Lane Location 0 Longitudinal Velocity (m/s)	Left Lane Location 1 Longitudinal Velocity (m/s)
-4.5	199.98	199.98	199.98	0.00	0.00
-4.0	199.98	199.98	199.98	0.00	0.00
-3.5	199.98	199.98	199.98	0.00	0.00
-3.0	199.98	199.98	199.98	0.00	0.00
-2.5	199.98	199.98	199.98	0.00	0.00
-2.0	199.98	199.98	199.98	0.00	0.00
-1.5	199.98	199.98	199.98	0.00	0.00
-1.0	199.98	199.98	199.98	0.00	0.00
-0.5	199.98	199.98	199.98	0.00	0.00
0.0	199.98	199.98	199.98	0.00	0.00
0.5	199.98	199.98	199.98	0.00	0.00
1.0	199.98	199.98	199.98	0.00	0.00
1.5	199.98	199.98	199.98	0.00	0.00
2.0	199.98	199.98	199.98	0.00	0.00
2.5	199.98	199.98	199.98	0.00	0.00
3.0	199.98	199.98	199.98	0.00	0.00

Event Data (500 ms) (Record 2 - FPB Alert Event) - Table 17 of 23

Time (sec)	Left Lane Location 2 Longitudinal Velocity (m/s)	Left Lane Location 3 Longitudinal Velocity (m/s)	Left Lane Location 4 Longitudinal Velocity (m/s)	Left Lane Location 5 Longitudinal Velocity (m/s)	Left Lane Location 6 Longitudinal Velocity (m/s)
-4.5	0.00	0.00	0.00	0.00	0.00
-4.0	0.00	0.00	0.00	0.00	0.00
-3.5	0.00	0.00	0.00	0.00	0.00
-3.0	0.00	0.00	0.00	0.00	0.00
-2.5	0.00	0.00	0.00	0.00	0.00
-2.0	0.00	0.00	0.00	0.00	0.00
-1.5	0.00	0.00	0.00	0.00	0.00
-1.0	0.00	0.00	0.00	0.00	0.00
-0.5	0.00	0.00	0.00	0.00	0.00
0.0	0.00	0.00	0.00	0.00	0.00
0.5	0.00	0.00	0.00	0.00	0.00
1.0	0.00	0.00	0.00	0.00	0.00
1.5	0.00	0.00	0.00	0.00	0.00
2.0	0.00	0.00	0.00	0.00	0.00
2.5	0.00	0.00	0.00	0.00	0.00
3.0	0.00	0.00	0.00	0.00	0.00

Event Data (500 ms) (Record 2 - FPB Alert Event) - Table 18 of 23

Time (sec)	Left Lane Location 7 Longitudinal Velocity (m/s)	Right Lane Location 0 Longitudinal Velocity (m/s)	Right Lane Location 1 Longitudinal Velocity (m/s)	Right Lane Location 2 Longitudinal Velocity (m/s)	Right Lane Location 3 Longitudinal Velocity (m/s)
-4.5	0.00	0.00	0.00	0.00	0.00
-4.0	0.00	0.00	0.00	0.00	0.00
-3.5	0.00	0.00	0.00	0.00	0.00
-3.0	0.00	0.00	0.00	0.00	0.00
-2.5	0.00	0.00	0.00	0.00	0.00
-2.0	0.00	0.00	0.00	0.00	0.00
-1.5	0.00	0.00	0.00	0.00	0.00
-1.0	0.00	0.00	0.00	0.00	0.00
-0.5	0.00	0.00	0.00	0.00	0.00
0.0	0.00	0.00	0.00	0.00	0.00
0.5	0.00	0.00	0.00	0.00	0.00
1.0	0.00	0.00	0.00	0.00	0.00
1.5	0.00	0.00	0.00	0.00	0.00
2.0	0.00	0.00	0.00	0.00	0.00
2.5	0.00	0.00	0.00	0.00	0.00
3.0	0.00	0.00	0.00	0.00	0.00

Event Data (500 ms) (Record 2 - FPB Alert Event) - Table 19 of 23

Time (sec)	Right Lane Location 4 Longitudinal Velocity (m/s)	Right Lane Location 5 Longitudinal Velocity (m/s)	Right Lane Location 6 Longitudinal Velocity (m/s)	Right Lane Location 7 Longitudinal Velocity (m/s)	Left Lane Location 0 Lateral Distance (m)
-4.5	0.00	0.00	0.00	0.00	0.00
-4.0	0.00	0.00	0.00	0.00	0.00
-3.5	0.00	0.00	0.00	0.00	0.00
-3.0	0.00	0.00	0.00	0.00	0.00
-2.5	0.00	0.00	0.00	0.00	0.00
-2.0	0.00	0.00	0.00	0.00	0.00
-1.5	0.00	0.00	0.00	0.00	0.00
-1.0	0.00	0.00	0.00	0.00	0.00
-0.5	0.00	0.00	0.00	0.00	0.00
0.0	0.00	0.00	0.00	0.00	0.00
0.5	0.00	0.00	0.00	0.00	0.00
1.0	0.00	0.00	0.00	0.00	0.00
1.5	0.00	0.00	0.00	0.00	0.00
2.0	0.00	0.00	0.00	0.00	0.00
2.5	0.00	0.00	0.00	0.00	0.00
3.0	0.00	0.00	0.00	0.00	0.00

Event Data (500 ms) (Record 2 - FPB Alert Event) - Table 20 of 23

Time (sec)	Left Lane Location 1 Lateral Distance (m)	Left Lane Location 2 Lateral Distance (m)	Left Lane Location 3 Lateral Distance (m)	Left Lane Location 4 Lateral Distance (m)	Left Lane Location 5 Lateral Distance (m)
-4.5	0.00	0.00	0.00	0.00	0.00
-4.0	0.00	0.00	0.00	0.00	0.00
-3.5	0.00	0.00	0.00	0.00	0.00
-3.0	0.00	0.00	0.00	0.00	0.00
-2.5	0.00	0.00	0.00	0.00	0.00
-2.0	0.00	0.00	0.00	0.00	0.00
-1.5	0.00	0.00	0.00	0.00	0.00
-1.0	0.00	0.00	0.00	0.00	0.00
-0.5	0.00	0.00	0.00	0.00	0.00
0.0	0.00	0.00	0.00	0.00	0.00
0.5	0.00	0.00	0.00	0.00	0.00
1.0	0.00	0.00	0.00	0.00	0.00
1.5	0.00	0.00	0.00	0.00	0.00
2.0	0.00	0.00	0.00	0.00	0.00
2.5	0.00	0.00	0.00	0.00	0.00
3.0	0.00	0.00	0.00	0.00	0.00

Event Data (500 ms) (Record 2 - FPB Alert Event) - Table 21 of 23

Time (sec)	Left Lane Location 6 Lateral Distance (m)	Left Lane Location 7 Lateral Distance (m)	Right Lane Location 0 Lateral Distance (m)	Right Lane Location 1 Lateral Distance (m)	Right Lane Location 2 Lateral Distance (m)
-4.5	0.00	0.00	0.00	0.00	0.00
-4.0	0.00	0.00	0.00	0.00	0.00
-3.5	0.00	0.00	0.00	0.00	0.00
-3.0	0.00	0.00	0.00	0.00	0.00
-2.5	0.00	0.00	0.00	0.00	0.00
-2.0	0.00	0.00	0.00	0.00	0.00
-1.5	0.00	0.00	0.00	0.00	0.00
-1.0	0.00	0.00	0.00	0.00	0.00
-0.5	0.00	0.00	0.00	0.00	0.00
0.0	0.00	0.00	0.00	0.00	0.00
0.5	0.00	0.00	0.00	0.00	0.00
1.0	0.00	0.00	0.00	0.00	0.00
1.5	0.00	0.00	0.00	0.00	0.00
2.0	0.00	0.00	0.00	0.00	0.00
2.5	0.00	0.00	0.00	0.00	0.00
3.0	0.00	0.00	0.00	0.00	0.00

Event Data (500 ms) (Record 2 - FPB Alert Event) - Table 22 of 23

Time (sec)	Right Lane Location 3 Lateral Distance (m)	Right Lane Location 4 Lateral Distance (m)	Right Lane Location 5 Lateral Distance (m)	Right Lane Location 6 Lateral Distance (m)	Right Lane Location 7 Lateral Distance (m)
-4.5	0.00	0.00	0.00	0.00	0.00
-4.0	0.00	0.00	0.00	0.00	0.00
-3.5	0.00	0.00	0.00	0.00	0.00
-3.0	0.00	0.00	0.00	0.00	0.00
-2.5	0.00	0.00	0.00	0.00	0.00
-2.0	0.00	0.00	0.00	0.00	0.00
-1.5	0.00	0.00	0.00	0.00	0.00
-1.0	0.00	0.00	0.00	0.00	0.00
-0.5	0.00	0.00	0.00	0.00	0.00
0.0	0.00	0.00	0.00	0.00	0.00
0.5	0.00	0.00	0.00	0.00	0.00
1.0	0.00	0.00	0.00	0.00	0.00
1.5	0.00	0.00	0.00	0.00	0.00
2.0	0.00	0.00	0.00	0.00	0.00
2.5	0.00	0.00	0.00	0.00	0.00
3.0	0.00	0.00	0.00	0.00	0.00

Event Data (500 ms) (Record 2 - FPB Alert Event) - Table 23 of 23

Time (sec)	Steering Assist Request Type
-4.5	No Request
-4.0	No Request
-3.5	No Request
-3.0	No Request
-2.5	No Request
-2.0	No Request
-1.5	No Request
-1.0	No Request
-0.5	No Request
0.0	No Request
0.5	No Request
1.0	No Request
1.5	No Request
2.0	No Request
2.5	No Request
3.0	No Request

System Status at Event (Record 3 - FPB Alert Event)

UTC Date at Event	
UTC Time at Event	
GPS Latitudinal Position (degrees)	
GPS Longitudinal Position (degrees)	
Odometer (miles)	6034
ASCM Event Counter	38
ASCM Event Trigger Type	FPB Alert Event
Vehicle Speed (MPH)	1
Maximum Requested Acceleration (m/s^2)	0.00
Duration of Maximum Acceleration Request (Seconds)	0
FCA Gap Customer Setting	Far
LKA Customer Setting	Off
AEB Customer Setting	Alert and Brake
FPB Customer Setting	Alert and Brake
ACC Type Customer Setting	Enhanced Cruise Control
Lane Change on Demand Customer Setting	Lane Change on Demand and Automatic Lane Change
Data Write Complete	Write Complete

Event Data (Record 3 - FPB Alert Event) - Table 1 of 12

Time (sec)	Vehicle Speed Average Non-Driven (MPH)	Accelerator Pedal, % Full (%)	Steering Wheel Angle (deg)	Steering Wheel Angle Gradient (deg/sec)	Brake Pedal Capacity (%)
-4.9	10	0.00	-28.184	-10.000	0
-4.8	10	0.00	-28.229	6.000	0
-4.7	10	0.00	-29.810	-52.000	5
-4.6	10	0.00	-34.868	-50.000	10
-4.5	9	0.00	-39.543	-44.000	14
-4.4	9	0.00	-44.308	-48.000	15
-4.3	9	0.00	-49.050	-52.000	18
-4.2	9	0.00	-54.064	-54.000	19
-4.1	9	0.00	-58.874	-48.000	19
-4.0	9	0.00	-64.000	-56.000	19
-3.9	9	0.00	-69.736	-52.000	18
-3.8	9	0.00	-74.863	-54.000	17
-3.7	8	0.00	-79.357	-30.000	16
-3.6	8	0.00	-80.802	18.000	13
-3.5	8	0.00	-78.182	50.000	8
-3.4	8	0.00	-74.050	32.000	7
-3.3	8	0.00	-71.859	10.000	6
-3.2	8	0.00	-70.933	14.000	6
-3.1	8	0.00	-69.736	20.000	6
-3.0	8	0.00	-67.049	32.000	6
-2.9	8	0.00	-63.549	40.000	6
-2.8	8	0.00	-59.868	44.000	5
-2.7	7	0.00	-56.435	28.000	4
-2.6	7	0.00	-53.680	34.000	4
-2.5	7	0.00	-49.231	60.000	4
-2.4	7	0.00	-42.998	72.000	4
-2.3	7	0.00	-36.743	58.000	5
-2.2	7	0.00	-31.300	48.000	5
-2.1	7	0.00	-27.167	28.000	5
-2.0	7	0.00	-24.615	18.000	5
-1.9	7	0.00	-23.735	0.000	5
-1.8	7	0.00	-23.802	-6.000	5
-1.7	7	0.00	-23.938	2.000	5
-1.6	7	0.00	-23.938	-2.000	5
-1.5	7	0.00	-24.051	-4.000	4
-1.4	7	0.00	-24.119	6.000	4
-1.3	7	0.00	-23.870	12.000	4
-1.2	7	0.00	-22.357	44.000	5
-1.1	7	0.00	-16.870	64.000	6
-1.0	6	0.00	-11.359	26.000	7
-0.9	6	0.00	-9.982	-18.000	8
-0.8	6	0.00	-10.366	-4.000	9
-0.7	6	0.00	-10.479	2.000	11
-0.6	6	0.00	-10.479	2.000	12
-0.5	6	0.00	-10.433	2.000	13
-0.4	6	0.00	-9.982	24.000	14
-0.3	6	0.00	-6.730	46.000	14
-0.2	6	0.00	-2.552	32.000	14
-0.1	6	0.00	-1.310	-2.000	15
0.0	6	0.00	-1.242	2.000	17
0.1	6	0.00	-0.497	34.000	18
0.2	5	0.00	5.804	102.000	18
0.3	5	0.00	14.927	70.000	15
0.4	5	0.00	19.489	8.000	15
0.5	5	0.00	19.060	-20.000	15
0.6	5	0.00	18.179	14.000	15
0.7	5	0.00	19.421	26.000	13
0.8	5	0.00	21.612	14.000	13
0.9	5	0.00	22.244	-2.000	13

Time (sec)	Vehicle Speed Average Non-Driven (MPH)	Accelerator Pedal, % Full (%)	Steering Wheel Angle (deg)	Steering Wheel Angle Gradient (deg/sec)	Brake Pedal Capacity (%)
1.0	4	0.00	22.312	-2.000	13
1.1	4	0.00	22.312	-2.000	15
1.2	4	0.00	22.312	2.000	19
1.3	4	0.00	22.854	8.000	21
1.4	4	0.00	23.486	0.000	22
1.5	4	0.00	23.622	2.000	22
1.6	4	0.00	23.622	-2.000	23
1.7	4	0.00	23.622	-4.000	25
1.8	4	0.00	23.419	-4.000	27
1.9	3	0.00	23.238	-4.000	29
2.0	3	0.00	23.057	0.000	30
2.1	3	0.00	22.989	-2.000	31
2.2	3	0.00	22.809	0.000	31
2.3	2	0.00	22.741	-4.000	28
2.4	2	0.00	22.493	-2.000	27
2.5	2	0.00	22.312	-4.000	27
2.6	2	0.00	22.041	-4.000	27
2.7	2	0.00	21.747	0.000	27
2.8	1	0.00	21.544	0.000	26
2.9	1	0.00	21.431	0.000	25
3.0	1	0.00	21.431	-2.000	25

Event Data (Record 3 - FPB Alert Event) - Table 2 of 12

Time (sec)	ASCM Yaw Rate (deg/sec)	ASCM Lateral Acceleration (m/s^2)	ASCM Longitudinal Acceleration (m/s^2)	SDM Notification Event Status	ABS Active
-4.9	-1.990	-0.75	0.00	No Event	False
-4.8	-1.847	-0.75	0.00	No Event	False
-4.7	-1.933	-0.75	0.00	No Event	False
-4.6	-2.216	-0.50	0.00	No Event	False
-4.5	-2.642	-0.50	0.00	No Event	False
-4.4	-3.071	-0.75	0.00	No Event	False
-4.3	-3.128	-1.00	-0.25	No Event	False
-4.2	-3.185	-1.00	-0.50	No Event	False
-4.1	-3.611	-1.00	-0.50	No Event	False
-4.0	-4.010	-1.00	-0.50	No Event	False
-3.9	-4.209	-0.75	-0.50	No Event	False
-3.8	-4.662	-0.75	-0.50	No Event	False
-3.7	-4.805	-1.00	-0.50	No Event	False
-3.6	-4.778	-1.00	-0.50	No Event	False
-3.5	-4.948	-1.25	-0.25	No Event	False
-3.4	-5.005	-1.00	0.00	No Event	False
-3.3	-4.606	-0.50	0.00	No Event	False
-3.2	-4.180	-0.50	0.00	No Event	False
-3.1	-4.236	-0.75	0.00	No Event	False
-3.0	-4.323	-1.00	0.00	No Event	False
-2.9	-3.980	-1.00	0.00	No Event	False
-2.8	-3.611	-0.75	0.00	No Event	False
-2.7	-3.524	-0.75	0.00	No Event	False
-2.6	-3.268	-0.75	0.00	No Event	False
-2.5	-2.899	-0.75	0.00	No Event	False
-2.4	-2.759	-0.75	0.00	No Event	False
-2.3	-2.616	-0.75	0.00	No Event	False
-2.2	-2.073	-0.50	0.00	No Event	False
-2.1	-1.478	-0.75	0.00	No Event	False
-2.0	-1.507	-0.75	0.00	No Event	False
-1.9	-1.564	-0.75	0.00	No Event	False
-1.8	-1.278	-0.50	0.00	No Event	False
-1.7	-1.165	-0.50	0.00	No Event	False
-1.6	-1.335	-0.50	0.00	No Event	False
-1.5	-1.421	-0.75	0.00	No Event	False
-1.4	-1.278	-0.75	0.00	No Event	False
-1.3	-1.108	-0.75	0.00	No Event	False
-1.2	-1.221	-0.50	0.00	No Event	False
-1.1	-1.335	-0.50	0.00	No Event	False
-1.0	-1.022	-0.50	0.00	No Event	False
-0.9	-0.369	-0.50	0.00	No Event	False
-0.8	-0.140	-0.50	0.00	No Event	False
-0.7	-0.483	-0.25	0.00	No Event	False
-0.6	-0.795	-0.25	0.00	No Event	False
-0.5	-0.453	-0.25	-0.25	No Event	False
-0.4	-0.140	-0.50	-0.25	No Event	False
-0.3	-0.396	-0.50	-0.25	No Event	False
-0.2	-0.453	-0.25	-0.25	No Event	False
-0.1	-0.113	-0.25	-0.25	No Event	False
0.0	0.113	-0.25	-0.25	No Event	False
0.1	0.000	-0.25	-0.50	No Event	False
0.2	-0.083	-0.25	-0.50	No Event	False
0.3	0.226	-0.25	-0.50	No Event	False
0.4	0.652	-0.25	-0.25	No Event	False
0.5	0.879	-0.25	-0.25	No Event	False
0.6	0.709	0.00	-0.25	No Event	False
0.7	0.539	-0.25	-0.25	No Event	False
0.8	0.682	-0.25	-0.25	No Event	False
0.9	0.822	-0.25	-0.25	No Event	False

Time (sec)	ASCM Yaw Rate (deg/sec)	ASCM Lateral Acceleration (m/s^2)	ASCM Longitudinal Acceleration (m/s^2)	SDM Notification Event Status	ABS Active
1.0	0.822	-0.25	0.00	No Event	False
1.1	0.739	-0.25	0.00	No Event	False
1.2	0.709	-0.25	0.00	No Event	False
1.3	0.709	-0.25	-0.25	No Event	False
1.4	0.766	-0.25	-0.50	No Event	False
1.5	0.739	-0.25	-0.50	No Event	False
1.6	0.596	-0.50	-0.50	No Event	False
1.7	0.596	-0.25	-0.50	No Event	False
1.8	0.739	-0.25	-0.50	No Event	False
1.9	0.652	-0.25	-0.75	No Event	False
2.0	0.453	-0.25	-0.75	No Event	False
2.1	0.453	-0.50	-1.00	No Event	False
2.2	0.539	-0.25	-1.00	No Event	False
2.3	0.483	-0.25	-1.00	No Event	False
2.4	0.313	-0.25	-0.75	No Event	False
2.5	0.283	-0.25	-0.75	No Event	False
2.6	0.369	-0.25	-0.75	No Event	False
2.7	0.340	-0.50	-0.75	No Event	False
2.8	0.226	-0.50	-0.75	No Event	False
2.9	0.140	-0.25	-0.50	No Event	False
3.0	0.140	-0.25	-0.50	No Event	False

Event Data (Record 3 - FPB Alert Event) - Table 3 of 12

Time (sec)	System Power Mode	AEB Operational Status	AEB Object Type	AEB Object Longitudinal Distance (m)	AEB Object Relative Longitudinal Velocity (m/s)
-4.9	Propulsion	Running	Unknown	199.68	0.00
-4.8	Propulsion	Running	Unknown	199.68	0.00
-4.7	Propulsion	Running	Unknown	199.68	0.00
-4.6	Propulsion	Running	Unknown	199.68	0.00
-4.5	Propulsion	Running	Vehicle	19.37	-3.01
-4.4	Propulsion	Running	Vehicle	18.67	-3.01
-4.3	Propulsion	Running	Vehicle	18.12	-3.01
-4.2	Propulsion	Running	Vehicle	17.62	-3.01
-4.1	Propulsion	Running	Vehicle	17.12	-3.01
-4.0	Propulsion	Running	Unknown	199.68	0.00
-3.9	Propulsion	Running	Unknown	199.68	0.00
-3.8	Propulsion	Running	Unknown	199.68	0.00
-3.7	Propulsion	Running	Unknown	199.68	0.00
-3.6	Propulsion	Running	Unknown	199.68	0.00
-3.5	Propulsion	Running	Unknown	199.68	0.00
-3.4	Propulsion	Running	Unknown	199.68	0.00
-3.3	Propulsion	Running	Unknown	199.68	0.00
-3.2	Propulsion	Running	Unknown	199.68	0.00
-3.1	Propulsion	Running	Unknown	199.68	0.00
-3.0	Propulsion	Running	Unknown	199.68	0.00
-2.9	Propulsion	Running	Unknown	199.68	0.00
-2.8	Propulsion	Running	Unknown	199.68	0.00
-2.7	Propulsion	Running	Unknown	199.68	0.00
-2.6	Propulsion	Running	Unknown	199.68	0.00
-2.5	Propulsion	Running	Unknown	199.68	0.00
-2.4	Propulsion	Running	Unknown	199.68	0.00
-2.3	Propulsion	Running	Unknown	199.68	0.00
-2.2	Propulsion	Running	Unknown	199.68	0.00
-2.1	Propulsion	Running	Unknown	199.68	0.00
-2.0	Propulsion	Running	Unknown	199.68	0.00
-1.9	Propulsion	Running	Unknown	199.68	0.00
-1.8	Propulsion	Running	Unknown	199.68	0.00
-1.7	Propulsion	Running	Unknown	199.68	0.00
-1.6	Propulsion	Running	Unknown	199.68	0.00
-1.5	Propulsion	Running	Unknown	199.68	0.00
-1.4	Propulsion	Running	Unknown	199.68	0.00
-1.3	Propulsion	Running	Unknown	199.68	0.00
-1.2	Propulsion	Running	Unknown	199.68	0.00
-1.1	Propulsion	Running	Unknown	199.68	0.00
-1.0	Propulsion	Running	Unknown	199.68	0.00
-0.9	Propulsion	Running	Unknown	199.68	0.00
-0.8	Propulsion	Running	Unknown	199.68	0.00
-0.7	Propulsion	Running	Unknown	199.68	0.00
-0.6	Propulsion	Running	Unknown	199.68	0.00
-0.5	Propulsion	Running	Unknown	199.68	0.00
-0.4	Propulsion	Running	Unknown	199.68	0.00
-0.3	Propulsion	Running	Unknown	199.68	0.00
-0.2	Propulsion	Running	Unknown	199.68	0.00
-0.1	Propulsion	Running	Unknown	199.68	0.00
0.0	Propulsion	Running	Unknown	199.68	0.00
0.1	Propulsion	Running	Unknown	199.68	0.00
0.2	Propulsion	Running	Unknown	199.68	0.00
0.3	Propulsion	Running	Unknown	199.68	0.00
0.4	Propulsion	Running	Unknown	199.68	0.00
0.5	Propulsion	Running	Unknown	199.68	0.00
0.6	Propulsion	Running	Unknown	199.68	0.00
0.7	Propulsion	Running	Unknown	199.68	0.00
0.8	Propulsion	Running	Unknown	199.68	0.00
0.9	Propulsion	Running	Unknown	199.68	0.00

Time (sec)	System Power Mode	AEB Operational Status	AEB Object Type	AEB Object Longitudinal Distance (m)	AEB Object Relative Longitudinal Velocity (m/s)
1.0	Propulsion	Running	Unknown	199.68	0.00
1.1	Propulsion	Running	Unknown	199.68	0.00
1.2	Propulsion	Running	Unknown	199.68	0.00
1.3	Propulsion	Running	Unknown	199.68	0.00
1.4	Propulsion	Running	Unknown	199.68	0.00
1.5	Propulsion	Running	Unknown	199.68	0.00
1.6	Propulsion	Running	Unknown	199.68	0.00
1.7	Propulsion	Running	Unknown	199.68	0.00
1.8	Propulsion	Running	Unknown	199.68	0.00
1.9	Propulsion	Running	Unknown	199.68	0.00
2.0	Propulsion	Running	Unknown	199.68	0.00
2.1	Propulsion	Running	Unknown	199.68	0.00
2.2	Propulsion	Running	Unknown	199.68	0.00
2.3	Propulsion	Running	Unknown	199.68	0.00
2.4	Propulsion	Running	Unknown	199.68	0.00
2.5	Propulsion	Running	Unknown	199.68	0.00
2.6	Propulsion	Running	Unknown	199.68	0.00
2.7	Propulsion	Running	Unknown	199.68	0.00
2.8	Propulsion	Running	Unknown	199.68	0.00
2.9	Propulsion	Running	Unknown	199.68	0.00
3.0	Propulsion	Running	Unknown	199.68	0.00

Event Data (Record 3 - FPB Alert Event) - Table 4 of 12

Time (sec)	AEB Object Relative Longitudinal Acceleration (m/s^2)	AEB Object Lateral Distance (m)	AEB Object Lateral Velocity (m/s)	Vehicle Ahead Indicator Request Status	Tailgate Alert Request Status
-4.9	0.00	19.93	0.00	Off	False
-4.8	0.00	19.93	0.00	Off	False
-4.7	0.00	19.93	0.00	Off	False
-4.6	0.00	19.93	0.00	Off	False
-4.5	0.50	-3.77	0.63	Off	False
-4.4	0.50	-3.77	0.78	On	False
-4.3	0.50	-3.77	0.94	On	False
-4.2	0.50	-3.77	0.94	On	False
-4.1	0.50	-3.61	0.94	On	False
-4.0	0.00	19.93	0.00	On	False
-3.9	0.00	19.93	0.00	On	False
-3.8	0.00	19.93	0.00	Off	False
-3.7	0.00	19.93	0.00	Off	False
-3.6	0.00	19.93	0.00	Off	False
-3.5	0.00	19.93	0.00	Off	False
-3.4	0.00	19.93	0.00	Off	False
-3.3	0.00	19.93	0.00	Off	False
-3.2	0.00	19.93	0.00	Off	False
-3.1	0.00	19.93	0.00	Off	False
-3.0	0.00	19.93	0.00	Off	False
-2.9	0.00	19.93	0.00	Off	False
-2.8	0.00	19.93	0.00	Off	False
-2.7	0.00	19.93	0.00	Off	False
-2.6	0.00	19.93	0.00	Off	False
-2.5	0.00	19.93	0.00	Off	False
-2.4	0.00	19.93	0.00	Off	False
-2.3	0.00	19.93	0.00	Off	False
-2.2	0.00	19.93	0.00	Off	False
-2.1	0.00	19.93	0.00	Off	False
-2.0	0.00	19.93	0.00	Off	False
-1.9	0.00	19.93	0.00	Off	False
-1.8	0.00	19.93	0.00	Off	False
-1.7	0.00	19.93	0.00	Off	False
-1.6	0.00	19.93	0.00	Off	False
-1.5	0.00	19.93	0.00	Off	False
-1.4	0.00	19.93	0.00	Off	False
-1.3	0.00	19.93	0.00	Off	False
-1.2	0.00	19.93	0.00	Off	False
-1.1	0.00	19.93	0.00	Off	False
-1.0	0.00	19.93	0.00	Off	False
-0.9	0.00	19.93	0.00	Off	False
-0.8	0.00	19.93	0.00	Off	False
-0.7	0.00	19.93	0.00	Off	False
-0.6	0.00	19.93	0.00	Off	False
-0.5	0.00	19.93	0.00	Off	False
-0.4	0.00	19.93	0.00	Off	False
-0.3	0.00	19.93	0.00	On	False
-0.2	0.00	19.93	0.00	On	False
-0.1	0.00	19.93	0.00	Off	False
0.0	0.00	19.93	0.00	Off	False
0.1	0.00	19.93	0.00	On	False
0.2	0.00	19.93	0.00	On	False
0.3	0.00	19.93	0.00	On	False
0.4	0.00	19.93	0.00	On	False
0.5	0.00	19.93	0.00	On	False
0.6	0.00	19.93	0.00	On	False
0.7	0.00	19.93	0.00	On	False
0.8	0.00	19.93	0.00	On	False
0.9	0.00	19.93	0.00	On	False

Time (sec)	AEB Object Relative Longitudinal Acceleration (m/s^2)	AEB Object Lateral Distance (m)	AEB Object Lateral Velocity (m/s)	Vehicle Ahead Indicator Request Status	Tailgate Alert Request Status
1.0	0.00	19.93	0.00	On	False
1.1	0.00	19.93	0.00	On	False
1.2	0.00	19.93	0.00	On	False
1.3	0.00	19.93	0.00	On	False
1.4	0.00	19.93	0.00	On	False
1.5	0.00	19.93	0.00	On	False
1.6	0.00	19.93	0.00	On	False
1.7	0.00	19.93	0.00	On	False
1.8	0.00	19.93	0.00	On	False
1.9	0.00	19.93	0.00	On	False
2.0	0.00	19.93	0.00	On	False
2.1	0.00	19.93	0.00	On	False
2.2	0.00	19.93	0.00	On	False
2.3	0.00	19.93	0.00	On	False
2.4	0.00	19.93	0.00	On	False
2.5	0.00	19.93	0.00	On	False
2.6	0.00	19.93	0.00	On	False
2.7	0.00	19.93	0.00	On	False
2.8	0.00	19.93	0.00	On	False
2.9	0.00	19.93	0.00	On	False
3.0	0.00	19.93	0.00	On	False

Event Data (Record 3 - FPB Alert Event) - Table 5 of 12

Time (sec)	FCA Alert Request Status	AEB Brake Request Active	AEB Brake Request Type	AEB Braking Requested Acceleration (m/s^2)	AEB Axle Torque Request Active
-4.9	Off	False	None	0.00	False
-4.8	Off	False	None	0.00	False
-4.7	Off	False	None	0.00	False
-4.6	Off	False	None	0.00	False
-4.5	Off	False	None	0.00	False
-4.4	Off	False	None	0.00	False
-4.3	Off	False	None	0.00	False
-4.2	Off	False	None	0.00	False
-4.1	Off	False	None	0.00	False
-4.0	Off	False	None	0.00	False
-3.9	Off	False	None	0.00	False
-3.8	Off	False	None	0.00	False
-3.7	Off	False	None	0.00	False
-3.6	Off	False	None	0.00	False
-3.5	Off	False	None	0.00	False
-3.4	Off	False	None	0.00	False
-3.3	Off	False	None	0.00	False
-3.2	Off	False	None	0.00	False
-3.1	Off	False	None	0.00	False
-3.0	Off	False	None	0.00	False
-2.9	Off	False	None	0.00	False
-2.8	Off	False	None	0.00	False
-2.7	Off	False	None	0.00	False
-2.6	Off	False	None	0.00	False
-2.5	Off	False	None	0.00	False
-2.4	Off	False	None	0.00	False
-2.3	Off	False	None	0.00	False
-2.2	Off	False	None	0.00	False
-2.1	Off	False	None	0.00	False
-2.0	Off	False	None	0.00	False
-1.9	Off	False	None	0.00	False
-1.8	Off	False	None	0.00	False
-1.7	Off	False	None	0.00	False
-1.6	Off	False	None	0.00	False
-1.5	Off	False	None	0.00	False
-1.4	Off	False	None	0.00	False
-1.3	Off	False	None	0.00	False
-1.2	Off	False	None	0.00	False
-1.1	Off	False	None	0.00	False
-1.0	Off	False	None	0.00	False
-0.9	Off	False	None	0.00	False
-0.8	Off	False	None	0.00	False
-0.7	Off	False	None	0.00	False
-0.6	Off	False	None	0.00	False
-0.5	Off	False	None	0.00	False
-0.4	Off	False	None	0.00	False
-0.3	Off	False	None	0.00	False
-0.2	Off	False	None	0.00	False
-0.1	Off	False	None	0.00	False
0.0	Off	False	None	0.00	False
0.1	Off	False	None	0.00	False
0.2	Off	False	None	0.00	False
0.3	Off	False	None	0.00	False
0.4	Off	False	None	0.00	False
0.5	Off	False	None	0.00	False
0.6	Off	False	None	0.00	False
0.7	Off	False	None	0.00	False
0.8	Off	False	None	0.00	False
0.9	Off	False	None	0.00	False

Time (sec)	FCA Alert Request Status	AEB Brake Request Active	AEB Brake Request Type	AEB Braking Requested Acceleration (m/s^2)	AEB Axle Torque Request Active
1.0	Off	False	None	0.00	False
1.1	Off	False	None	0.00	False
1.2	Off	False	None	0.00	False
1.3	Off	False	None	0.00	False
1.4	Off	False	None	0.00	False
1.5	Off	False	None	0.00	False
1.6	Off	False	None	0.00	False
1.7	Off	False	None	0.00	False
1.8	Off	False	None	0.00	False
1.9	Off	False	None	0.00	False
2.0	Off	False	None	0.00	False
2.1	Off	False	None	0.00	False
2.2	Off	False	None	0.00	False
2.3	Off	False	None	0.00	False
2.4	Off	False	None	0.00	False
2.5	Off	False	None	0.00	False
2.6	Off	False	None	0.00	False
2.7	Off	False	None	0.00	False
2.8	Off	False	None	0.00	False
2.9	Off	False	None	0.00	False
3.0	Off	False	None	0.00	False

Event Data (Record 3 - FPB Alert Event) - Table 6 of 12

Time (sec)	FPB Warning Request Status	FPB Brake Request Active	FPB Brake Request Type	FPB Braking Requested Acceleration (m/s^2)	FPB Pedestrian Longitudinal Distance (m)
-4.9	None	False	None	0.00	16.57
-4.8	None	False	None	0.00	16.06
-4.7	None	False	None	0.00	15.56
-4.6	Pedestrian Detected	False	None	0.00	15.06
-4.5	Pedestrian Detected	False	None	0.00	14.56
-4.4	Pedestrian Detected	False	None	0.00	19.08
-4.3	Pedestrian Detected	False	None	0.00	18.57
-4.2	Pedestrian Detected	False	None	0.00	18.07
-4.1	Pedestrian Detected	False	None	0.00	17.57
-4.0	Pedestrian Detected	False	None	0.00	17.07
-3.9	Pedestrian Detected	False	None	0.00	16.57
-3.8	Pedestrian Detected	False	None	0.00	16.57
-3.7	Pedestrian Detected	False	None	0.00	16.06
-3.6	Pedestrian Detected	False	None	0.00	15.56
-3.5	None	False	None	0.00	15.56
-3.4	None	False	None	0.00	15.06
-3.3	None	False	None	0.00	15.06
-3.2	None	False	None	0.00	9.04
-3.1	None	False	None	0.00	8.53
-3.0	None	False	None	0.00	8.53
-2.9	None	False	None	0.00	8.53
-2.8	None	False	None	0.00	8.03
-2.7	None	False	None	0.00	8.03
-2.6	None	False	None	0.00	7.53
-2.5	None	False	None	0.00	7.53
-2.4	None	False	None	0.00	7.03
-2.3	None	False	None	0.00	6.53
-2.2	None	False	None	0.00	6.53
-2.1	None	False	None	0.00	6.02
-2.0	None	False	None	0.00	5.52
-1.9	None	False	None	0.00	5.52
-1.8	None	False	None	0.00	11.04
-1.7	None	False	None	0.00	11.04
-1.6	None	False	None	0.00	10.54
-1.5	None	False	None	0.00	10.54
-1.4	None	False	None	0.00	10.04
-1.3	None	False	None	0.00	10.04
-1.2	None	False	None	0.00	9.54
-1.1	Pedestrian Detected	False	None	0.00	9.54
-1.0	Pedestrian Detected	False	None	0.00	9.04
-0.9	Pedestrian Detected	False	None	0.00	8.53
-0.8	Pedestrian Detected	False	None	0.00	8.53
-0.7	Pedestrian Detected	False	None	0.00	8.03
-0.6	Pedestrian Detected	False	None	0.00	8.03
-0.5	Pedestrian Detected	False	None	0.00	7.53
-0.4	Pedestrian Detected	False	None	0.00	7.53
-0.3	Pedestrian Detected	False	None	0.00	7.03
-0.2	Pedestrian Detected	False	None	0.00	7.03
-0.1	Pedestrian Alert	False	None	0.00	6.53
0.0	Pedestrian Alert	False	None	0.00	6.53
0.1	Pedestrian Detected	False	None	0.00	6.02
0.2	Pedestrian Detected	False	None	0.00	5.52
0.3	Pedestrian Detected	False	None	0.00	5.52
0.4	Pedestrian Detected	False	None	0.00	5.02
0.5	Pedestrian Detected	False	None	0.00	5.02
0.6	Pedestrian Detected	False	None	0.00	5.02
0.7	Pedestrian Detected	False	None	0.00	4.52
0.8	Pedestrian Detected	False	None	0.00	4.52
0.9	Pedestrian Detected	False	None	0.00	4.02

Time (sec)	FPB Warning Request Status	FPB Brake Request Active	FPB Brake Request Type	FPB Braking Requested Acceleration (m/s^2)	FPB Pedestrian Longitudinal Distance (m)
1.0	Pedestrian Detected	False	None	0.00	4.02
1.1	Pedestrian Detected	False	None	0.00	4.02
1.2	Pedestrian Detected	False	None	0.00	3.51
1.3	Pedestrian Detected	False	None	0.00	3.51
1.4	Pedestrian Detected	False	None	0.00	3.01
1.5	Pedestrian Detected	False	None	0.00	3.01
1.6	Pedestrian Detected	False	None	0.00	100.40
1.7	Pedestrian Detected	False	None	0.00	100.40
1.8	Pedestrian Detected	False	None	0.00	100.40
1.9	Pedestrian Detected	False	None	0.00	100.40
2.0	Pedestrian Detected	False	None	0.00	100.40
2.1	None	False	None	0.00	100.40
2.2	None	False	None	0.00	100.40
2.3	None	False	None	0.00	100.40
2.4	None	False	None	0.00	100.40
2.5	None	False	None	0.00	100.40
2.6	None	False	None	0.00	100.40
2.7	None	False	None	0.00	100.40
2.8	None	False	None	0.00	100.40
2.9	None	False	None	0.00	100.40
3.0	None	False	None	0.00	100.40

Event Data (Record 3 - FPB Alert Event) - Table 7 of 12

Time (sec)	FPB Pedestrian Longitudinal Velocity (m/s)	FPB Pedestrian Longitudinal Acceleration (m/s^2)	FPB Pedestrian Lateral Distance (m)	FPB Pedestrian Lateral Velocity (m/s)	Driver Hand Detected on Steering Wheel
-4.9	0.00	0.00	-0.13	0.50	On
-4.8	0.00	0.00	-0.13	0.50	On
-4.7	0.00	0.00	0.00	0.63	On
-4.6	0.00	0.00	0.00	0.63	On
-4.5	0.00	0.00	0.00	0.63	On
-4.4	0.00	0.06	-1.76	1.00	On
-4.3	0.00	0.08	-1.63	1.13	On
-4.2	0.00	0.13	-1.51	1.26	On
-4.1	0.00	0.16	-1.38	1.26	On
-4.0	0.00	0.08	-1.26	1.38	On
-3.9	0.00	0.13	-1.00	1.38	On
-3.8	0.00	0.36	-0.88	1.51	On
-3.7	0.00	0.71	-0.75	1.63	On
-3.6	0.00	0.88	-0.50	1.76	On
-3.5	0.00	0.85	-0.25	1.88	On
-3.4	0.00	0.82	0.00	1.88	On
-3.3	0.00	0.85	0.00	1.76	On
-3.2	0.00	0.00	-2.26	1.00	On
-3.1	0.00	0.20	-2.13	1.00	On
-3.0	0.00	0.49	-2.13	1.00	On
-2.9	0.00	0.47	-2.01	1.00	On
-2.8	0.00	0.46	-1.88	0.88	On
-2.7	0.00	0.35	-1.88	0.88	On
-2.6	0.00	0.28	-1.76	0.88	On
-2.5	0.00	0.24	-1.76	0.88	On
-2.4	0.00	0.20	-1.76	0.75	On
-2.3	0.00	0.00	-1.63	0.75	On
-2.2	0.00	0.00	-1.51	0.75	On
-2.1	0.00	0.00	-1.51	0.63	On
-2.0	0.00	0.17	-1.51	0.50	On
-1.9	0.00	0.25	-1.51	0.50	On
-1.8	0.00	0.28	1.26	0.38	On
-1.7	0.00	0.22	1.26	0.25	On
-1.6	0.00	0.16	1.26	0.25	On
-1.5	0.00	0.14	1.26	0.25	On
-1.4	0.00	0.11	1.38	0.25	On
-1.3	0.00	0.06	1.38	0.25	On
-1.2	0.00	0.00	1.38	0.25	On
-1.1	0.00	0.00	1.38	0.25	On
-1.0	0.00	0.00	1.38	0.13	On
-0.9	0.00	0.03	1.38	0.13	On
-0.8	0.00	0.06	1.38	0.00	On
-0.7	0.00	0.03	1.38	0.00	On
-0.6	0.00	0.13	1.38	0.00	On
-0.5	0.00	0.22	1.38	0.00	On
-0.4	0.00	0.28	1.38	0.00	On
-0.3	0.00	0.28	1.38	0.00	On
-0.2	0.00	0.31	1.38	0.00	On
-0.1	0.00	0.38	1.38	0.00	On
0.0	0.00	0.38	1.38	0.00	On
0.1	0.00	0.28	1.38	0.00	On
0.2	0.00	0.19	1.38	0.00	On
0.3	0.00	0.27	1.38	0.00	On
0.4	0.00	0.47	1.38	0.00	On
0.5	0.00	0.60	1.38	0.00	On
0.6	0.00	0.68	1.38	0.00	On
0.7	0.00	0.53	1.38	0.00	On
0.8	0.00	0.60	1.38	0.00	On
0.9	0.00	0.52	1.38	0.00	On

Time (sec)	FPB Pedestrian Longitudinal Velocity (m/s)	FPB Pedestrian Longitudinal Acceleration (m/s^2)	FPB Pedestrian Lateral Distance (m)	FPB Pedestrian Lateral Velocity (m/s)	Driver Hand Detected on Steering Wheel
1.0	0.00	0.49	1.38	0.00	On
1.1	0.00	0.47	1.38	0.00	On
1.2	0.00	0.38	1.26	0.00	On
1.3	0.00	0.42	1.26	0.00	On
1.4	0.00	0.49	1.26	0.00	On
1.5	0.00	0.50	1.26	0.00	On
1.6	0.00	0.00	15.94	0.00	On
1.7	0.00	0.00	15.94	0.00	On
1.8	0.00	0.00	15.94	0.00	On
1.9	0.00	0.00	15.94	0.00	On
2.0	0.00	0.00	15.94	0.00	On
2.1	0.00	0.00	15.94	0.00	On
2.2	0.00	0.00	15.94	0.00	On
2.3	0.00	0.00	15.94	0.00	On
2.4	0.00	0.00	15.94	0.00	On
2.5	0.00	0.00	15.94	0.00	On
2.6	0.00	0.00	15.94	0.00	On
2.7	0.00	0.00	15.94	0.00	On
2.8	0.00	0.00	15.94	0.00	On
2.9	0.00	0.00	15.94	0.00	On
3.0	0.00	0.00	15.94	0.00	On

Event Data (Record 3 - FPB Alert Event) - Table 8 of 12

Time (sec)	Driver Hand Detection Confidence Level	Left SBZA Telltale State	Right SBZA Telltale State	LDW and Control Feature State	LKA Requested Torque Type
-4.9	Low	Off	Off	Off	No Control
-4.8	Low	Off	Off	Off	No Control
-4.7	Low	Off	Off	Off	No Control
-4.6	Low	Off	Off	Off	No Control
-4.5	Low	Off	Off	Off	No Control
-4.4	Low	Off	Off	Off	No Control
-4.3	Low	Off	Off	Off	No Control
-4.2	Low	Off	Off	Off	No Control
-4.1	Low	Off	Off	Off	No Control
-4.0	Low	Off	Off	Off	No Control
-3.9	Low	Off	Off	Off	No Control
-3.8	Low	Off	Off	Off	No Control
-3.7	Low	Off	Off	Off	No Control
-3.6	Low	Off	Off	Off	No Control
-3.5	Low	Off	Off	Off	No Control
-3.4	Low	Off	Off	Off	No Control
-3.3	Low	Off	Off	Off	No Control
-3.2	Low	Off	Off	Off	No Control
-3.1	Low	Off	Off	Off	No Control
-3.0	Low	Off	Off	Off	No Control
-2.9	Low	Off	Off	Off	No Control
-2.8	Low	Off	Off	Off	No Control
-2.7	Low	Off	Off	Off	No Control
-2.6	Low	Off	Off	Off	No Control
-2.5	Low	Off	Off	Off	No Control
-2.4	Low	Off	Off	Off	No Control
-2.3	Low	Off	Off	Off	No Control
-2.2	Low	Off	Off	Off	No Control
-2.1	Low	Off	Off	Off	No Control
-2.0	Low	Off	Off	Off	No Control
-1.9	Low	Off	Off	Off	No Control
-1.8	Low	Off	Off	Off	No Control
-1.7	Low	Off	Off	Off	No Control
-1.6	Low	Off	Off	Off	No Control
-1.5	Low	Off	Off	Off	No Control
-1.4	Low	Off	Off	Off	No Control
-1.3	Low	Off	Off	Off	No Control
-1.2	Low	Off	Off	Off	No Control
-1.1	Low	Off	Off	Off	No Control
-1.0	Low	Off	Off	Off	No Control
-0.9	Low	Off	Off	Off	No Control
-0.8	Low	Off	Off	Off	No Control
-0.7	Low	Off	Off	Off	No Control
-0.6	Low	Off	Off	Off	No Control
-0.5	Low	Off	Off	Off	No Control
-0.4	Low	Off	Off	Off	No Control
-0.3	Low	Off	Off	Off	No Control
-0.2	Low	Off	Off	Off	No Control
-0.1	Low	Off	Off	Off	No Control
0.0	Low	Off	Off	Off	No Control
0.1	Low	Off	Off	Off	No Control
0.2	Low	Off	Off	Off	No Control
0.3	Low	Off	Off	Off	No Control
0.4	Low	Off	Off	Off	No Control
0.5	Low	Off	Off	Off	No Control
0.6	Low	Off	Off	Off	No Control
0.7	Low	Off	Off	Off	No Control
0.8	Low	Off	Off	Off	No Control
0.9	Low	Off	Off	Off	No Control

Time (sec)	Driver Hand Detection Confidence Level	Left SBZA Telltale State	Right SBZA Telltale State	LDW and Control Feature State	LKA Requested Torque Type
1.0	Low	Off	Off	Off	No Control
1.1	Low	Off	Off	Off	No Control
1.2	Low	Off	Off	Off	No Control
1.3	Low	Off	Off	Off	No Control
1.4	Low	Off	Off	Off	No Control
1.5	Low	Off	Off	Off	No Control
1.6	Low	Off	Off	Off	No Control
1.7	Low	Off	Off	Off	No Control
1.8	Low	Off	Off	Off	No Control
1.9	Low	Off	Off	Off	No Control
2.0	Low	Off	Off	Off	No Control
2.1	Low	Off	Off	Off	No Control
2.2	Low	Off	Off	Off	No Control
2.3	Low	Off	Off	Off	No Control
2.4	Low	Off	Off	Off	No Control
2.5	Low	Off	Off	Off	No Control
2.6	Low	Off	Off	Off	No Control
2.7	Low	Off	Off	Off	No Control
2.8	Low	Off	Off	Off	No Control
2.9	Low	Off	Off	Off	No Control
3.0	Low	Off	Off	Off	No Control

Event Data (Record 3 - FPB Alert Event) - Table 9 of 12

Time (sec)	LKA Visual Alert Request Status	Left Lane Marking Lateral Offset (m)	Right Lane Marking Lateral Offset (m)	ACC Axle Torque Request Active	ACC Brake Request Type
-4.9	Indicator Off	2.35	-1.00	False	No Braking
-4.8	Indicator Off	2.31	-1.00	False	No Braking
-4.7	Indicator Off	2.22	-1.00	False	No Braking
-4.6	Indicator Off	2.15	-1.00	False	No Braking
-4.5	Indicator Off	2.09	-1.00	False	No Braking
-4.4	Indicator Off	2.04	-1.00	False	No Braking
-4.3	Indicator Off	1.99	-1.00	False	No Braking
-4.2	Indicator Off	1.91	-1.00	False	No Braking
-4.1	Indicator Off	1.87	-1.00	False	No Braking
-4.0	Indicator Off	1.83	-1.00	False	No Braking
-3.9	Indicator Off	1.85	-1.00	False	No Braking
-3.8	Indicator Off	1.83	-1.00	False	No Braking
-3.7	Indicator Off	1.79	-1.00	False	No Braking
-3.6	Indicator Off	1.79	-1.00	False	No Braking
-3.5	Indicator Off	1.75	-1.00	False	No Braking
-3.4	Indicator Off	1.73	-1.00	False	No Braking
-3.3	Indicator Off	1.75	-1.00	False	No Braking
-3.2	Indicator Off	1.75	-1.84	False	No Braking
-3.1	Indicator Off	1.65	-1.87	False	No Braking
-3.0	Indicator Off	1.73	-1.97	False	No Braking
-2.9	Indicator Off	1.75	-1.93	False	No Braking
-2.8	Indicator Off	1.73	-1.90	False	No Braking
-2.7	Indicator Off	1.68	-1.91	False	No Braking
-2.6	Indicator Off	1.72	-1.90	False	No Braking
-2.5	Indicator Off	1.68	-1.95	False	No Braking
-2.4	Indicator Off	1.68	-1.95	False	No Braking
-2.3	Indicator Off	1.69	-1.86	False	No Braking
-2.2	Indicator Off	1.69	-1.90	False	No Braking
-2.1	Indicator Off	1.69	-1.89	False	No Braking
-2.0	Indicator Off	1.70	-1.88	False	No Braking
-1.9	Indicator Off	1.70	-1.87	False	No Braking
-1.8	Indicator Off	1.70	-1.86	False	No Braking
-1.7	Indicator Off	1.71	-1.85	False	No Braking
-1.6	Indicator Off	1.71	-1.85	False	No Braking
-1.5	Indicator Off	1.71	-1.83	False	No Braking
-1.4	Indicator Off	1.71	-1.83	False	No Braking
-1.3	Indicator Off	1.71	-1.81	False	No Braking
-1.2	Indicator Off	1.71	-1.81	False	No Braking
-1.1	Indicator Off	1.71	-1.79	False	No Braking
-1.0	Indicator Off	1.71	-1.77	False	No Braking
-0.9	Indicator Off	1.71	-1.75	False	No Braking
-0.8	Indicator Off	1.71	-1.75	False	No Braking
-0.7	Indicator Off	1.71	-1.75	False	No Braking
-0.6	Indicator Off	1.71	-1.73	False	No Braking
-0.5	Indicator Off	1.71	-1.72	False	No Braking
-0.4	Indicator Off	1.71	-1.71	False	No Braking
-0.3	Indicator Off	1.71	-1.70	False	No Braking
-0.2	Indicator Off	1.71	-1.69	False	No Braking
-0.1	Indicator Off	1.71	-1.68	False	No Braking
0.0	Indicator Off	1.71	-1.68	False	No Braking
0.1	Indicator Off	1.71	-1.66	False	No Braking
0.2	Indicator Off	1.71	-1.66	False	No Braking
0.3	Indicator Off	1.71	-1.65	False	No Braking
0.4	Indicator Off	1.71	-1.65	False	No Braking
0.5	Indicator Off	1.71	-1.65	False	No Braking
0.6	Indicator Off	1.71	-1.63	False	No Braking
0.7	Indicator Off	1.71	-1.63	False	No Braking
0.8	Indicator Off	1.71	-1.63	False	No Braking
0.9	Indicator Off	1.71	-1.63	False	No Braking

Time (sec)	LKA Visual Alert Request Status	Left Lane Marking Lateral Offset (m)	Right Lane Marking Lateral Offset (m)	ACC Axle Torque Request Active	ACC Brake Request Type
1.0	Indicator Off	1.71	-1.61	False	No Braking
1.1	Indicator Off	1.71	-1.61	False	No Braking
1.2	Indicator Off	1.71	-1.61	False	No Braking
1.3	Indicator Off	1.71	-1.61	False	No Braking
1.4	Indicator Off	1.71	-1.61	False	No Braking
1.5	Indicator Off	1.71	-1.59	False	No Braking
1.6	Indicator Off	1.71	-1.59	False	No Braking
1.7	Indicator Off	1.71	-1.59	False	No Braking
1.8	Indicator Off	1.71	-1.59	False	No Braking
1.9	Indicator Off	1.71	-1.59	False	No Braking
2.0	Indicator Off	1.71	-1.59	False	No Braking
2.1	Indicator Off	1.71	-1.59	False	No Braking
2.2	Indicator Off	1.71	-1.59	False	No Braking
2.3	Indicator Off	1.71	-1.59	False	No Braking
2.4	Indicator Off	1.71	-1.59	False	No Braking
2.5	Indicator Off	1.71	-1.59	False	No Braking
2.6	Indicator Off	1.71	-1.59	False	No Braking
2.7	Indicator Off	1.71	-1.59	False	No Braking
2.8	Indicator Off	1.71	-1.59	False	No Braking
2.9	Indicator Off	1.71	-1.59	False	No Braking
3.0	Indicator Off	1.71	-1.59	False	No Braking

Event Data (Record 3 - FPB Alert Event) - Table 10 of 12

Time (sec)	ACC Brake Request Active	ACC Braking Requested Acceleration (m/s^2)	LCC Driver Steering Detected	Steering Wheel Touch Zone 1	Steering Wheel Touch Zone 2
-4.9	False	0.0000	False	True	False
-4.8	False	0.0000	False	True	False
-4.7	False	0.0000	False	True	False
-4.6	False	0.0000	False	True	False
-4.5	False	0.0000	False	True	False
-4.4	False	0.0000	False	True	True
-4.3	False	0.0000	False	True	True
-4.2	False	0.0000	False	True	True
-4.1	False	0.0000	False	True	True
-4.0	False	0.0000	False	True	True
-3.9	False	0.0000	False	True	True
-3.8	False	0.0000	False	True	True
-3.7	False	0.0000	False	True	True
-3.6	False	0.0000	False	True	True
-3.5	False	0.0000	False	True	True
-3.4	False	0.0000	False	True	True
-3.3	False	0.0000	False	True	True
-3.2	False	0.0000	False	True	True
-3.1	False	0.0000	False	True	True
-3.0	False	0.0000	False	True	True
-2.9	False	0.0000	False	True	True
-2.8	False	0.0000	False	True	True
-2.7	False	0.0000	False	True	True
-2.6	False	0.0000	False	True	True
-2.5	False	0.0000	False	True	True
-2.4	False	0.0000	False	True	True
-2.3	False	0.0000	False	True	True
-2.2	False	0.0000	False	True	True
-2.1	False	0.0000	False	True	True
-2.0	False	0.0000	False	True	True
-1.9	False	0.0000	False	True	True
-1.8	False	0.0000	False	True	True
-1.7	False	0.0000	False	True	True
-1.6	False	0.0000	False	True	True
-1.5	False	0.0000	False	True	True
-1.4	False	0.0000	False	True	True
-1.3	False	0.0000	False	True	True
-1.2	False	0.0000	False	True	True
-1.1	False	0.0000	False	True	True
-1.0	False	0.0000	False	True	True
-0.9	False	0.0000	False	True	False
-0.8	False	0.0000	False	True	False
-0.7	False	0.0000	False	True	False
-0.6	False	0.0000	False	True	False
-0.5	False	0.0000	False	True	False
-0.4	False	0.0000	False	True	False
-0.3	False	0.0000	False	False	False
-0.2	False	0.0000	False	False	False
-0.1	False	0.0000	False	False	False
0.0	False	0.0000	False	False	False
0.1	False	0.0000	False	False	False
0.2	False	0.0000	False	False	False
0.3	False	0.0000	False	False	False
0.4	False	0.0000	False	True	False
0.5	False	0.0000	False	True	False
0.6	False	0.0000	False	True	False
0.7	False	0.0000	False	True	False
0.8	False	0.0000	False	True	False
0.9	False	0.0000	False	True	False

Time (sec)	ACC Brake Request Active	ACC Braking Requested Acceleration (m/s^2)	LCC Driver Steering Detected	Steering Wheel Touch Zone 1	Steering Wheel Touch Zone 2
1.0	False	0.0000	False	True	False
1.1	False	0.0000	False	True	False
1.2	False	0.0000	False	True	False
1.3	False	0.0000	False	True	False
1.4	False	0.0000	False	True	False
1.5	False	0.0000	False	True	False
1.6	False	0.0000	False	True	False
1.7	False	0.0000	False	True	False
1.8	False	0.0000	False	True	False
1.9	False	0.0000	False	True	False
2.0	False	0.0000	False	True	False
2.1	False	0.0000	False	True	False
2.2	False	0.0000	False	True	False
2.3	False	0.0000	False	True	False
2.4	False	0.0000	False	True	False
2.5	False	0.0000	False	True	False
2.6	False	0.0000	False	True	False
2.7	False	0.0000	False	True	False
2.8	False	0.0000	False	True	False
2.9	False	0.0000	False	True	False
3.0	False	0.0000	False	True	False

Event Data (Record 3 - FPB Alert Event) - Table 11 of 12

Time (sec)	Steering Wheel Touch Zone 3	Driver Attention State	LCC Visual Warning Request Status	LCC Visual Alert Request Status	LCC Light Bar Request Status
-4.9	False	Unknown	No Indication	Off	Off
-4.8	False	Unknown	No Indication	Off	Off
-4.7	False	Unknown	No Indication	Off	Off
-4.6	False	Unknown	No Indication	Off	Off
-4.5	False	Unknown	No Indication	Off	Off
-4.4	False	Unknown	No Indication	Off	Off
-4.3	False	Unknown	No Indication	Off	Off
-4.2	False	Unknown	No Indication	Off	Off
-4.1	False	Unknown	No Indication	Off	Off
-4.0	False	Unknown	No Indication	Off	Off
-3.9	False	Unknown	No Indication	Off	Off
-3.8	False	Unknown	No Indication	Off	Off
-3.7	False	Unknown	No Indication	Off	Off
-3.6	False	Unknown	No Indication	Off	Off
-3.5	False	Unknown	No Indication	Off	Off
-3.4	False	Unknown	No Indication	Off	Off
-3.3	False	Unknown	No Indication	Off	Off
-3.2	False	Unknown	No Indication	Off	Off
-3.1	False	Unknown	No Indication	Off	Off
-3.0	False	Unknown	No Indication	Off	Off
-2.9	False	Unknown	No Indication	Off	Off
-2.8	False	Unknown	No Indication	Off	Off
-2.7	False	Unknown	No Indication	Off	Off
-2.6	False	Unknown	No Indication	Off	Off
-2.5	False	Unknown	No Indication	Off	Off
-2.4	False	Unknown	No Indication	Off	Off
-2.3	False	Unknown	No Indication	Off	Off
-2.2	False	Unknown	No Indication	Off	Off
-2.1	False	Unknown	No Indication	Off	Off
-2.0	False	Unknown	No Indication	Off	Off
-1.9	False	Unknown	No Indication	Off	Off
-1.8	False	Unknown	No Indication	Off	Off
-1.7	False	Unknown	No Indication	Off	Off
-1.6	False	Unknown	No Indication	Off	Off
-1.5	False	Unknown	No Indication	Off	Off
-1.4	False	Unknown	No Indication	Off	Off
-1.3	False	Unknown	No Indication	Off	Off
-1.2	False	Unknown	No Indication	Off	Off
-1.1	False	Unknown	No Indication	Off	Off
-1.0	False	Unknown	No Indication	Off	Off
-0.9	False	Unknown	No Indication	Off	Off
-0.8	False	Unknown	No Indication	Off	Off
-0.7	False	Unknown	No Indication	Off	Off
-0.6	False	Unknown	No Indication	Off	Off
-0.5	False	Unknown	No Indication	Off	Off
-0.4	False	Off Road	No Indication	Off	Off
-0.3	False	Off Road	No Indication	Off	Off
-0.2	False	Off Road	No Indication	Off	Off
-0.1	False	On Road	No Indication	Off	Off
0.0	False	On Road	No Indication	Off	Off
0.1	False	On Road	No Indication	Off	Off
0.2	False	On Road	No Indication	Off	Off
0.3	False	On Road	No Indication	Off	Off
0.4	False	On Road	No Indication	Off	Off
0.5	True	On Road	No Indication	Off	Off
0.6	True	On Road	No Indication	Off	Off
0.7	True	On Road	No Indication	Off	Off
0.8	True	On Road	No Indication	Off	Off
0.9	True	On Road	No Indication	Off	Off

Time (sec)	Steering Wheel Touch Zone 3	Driver Attention State	LCC Visual Warning Request Status	LCC Visual Alert Request Status	LCC Light Bar Request Status
1.0	True	On Road	No Indication	Off	Off
1.1	True	On Road	No Indication	Off	Off
1.2	True	On Road	No Indication	Off	Off
1.3	True	On Road	No Indication	Off	Off
1.4	True	On Road	No Indication	Off	Off
1.5	True	On Road	No Indication	Off	Off
1.6	True	On Road	No Indication	Off	Off
1.7	True	On Road	No Indication	Off	Off
1.8	True	On Road	No Indication	Off	Off
1.9	True	On Road	No Indication	Off	Off
2.0	True	On Road	No Indication	Off	Off
2.1	True	On Road	No Indication	Off	Off
2.2	True	On Road	No Indication	Off	Off
2.3	True	On Road	No Indication	Off	Off
2.4	True	On Road	No Indication	Off	Off
2.5	True	On Road	No Indication	Off	Off
2.6	True	On Road	No Indication	Off	Off
2.7	True	On Road	No Indication	Off	Off
2.8	True	On Road	No Indication	Off	Off
2.9	True	On Road	No Indication	Off	Off
3.0	True	On Road	No Indication	Off	Off

Event Data (Record 3 - FPB Alert Event) - Table 12 of 12

Time (sec)	LCC Light Bar Flash Rate	Lane Change Request State	LCC Steering Request Active
-4.9	None	No Lane Change Requested	False
-4.8	None	No Lane Change Requested	False
-4.7	None	No Lane Change Requested	False
-4.6	None	No Lane Change Requested	False
-4.5	None	No Lane Change Requested	False
-4.4	None	No Lane Change Requested	False
-4.3	None	No Lane Change Requested	False
-4.2	None	No Lane Change Requested	False
-4.1	None	No Lane Change Requested	False
-4.0	None	No Lane Change Requested	False
-3.9	None	No Lane Change Requested	False
-3.8	None	No Lane Change Requested	False
-3.7	None	No Lane Change Requested	False
-3.6	None	No Lane Change Requested	False
-3.5	None	No Lane Change Requested	False
-3.4	None	No Lane Change Requested	False
-3.3	None	No Lane Change Requested	False
-3.2	None	No Lane Change Requested	False
-3.1	None	No Lane Change Requested	False

Time (sec)	LCC Light Bar Flash Rate	Lane Change Request State	LCC Steering Request Active
-3.0	None	No Lane Change Requested	False
-2.9	None	No Lane Change Requested	False
-2.8	None	No Lane Change Requested	False
-2.7	None	No Lane Change Requested	False
-2.6	None	No Lane Change Requested	False
-2.5	None	No Lane Change Requested	False
-2.4	None	No Lane Change Requested	False
-2.3	None	No Lane Change Requested	False
-2.2	None	No Lane Change Requested	False
-2.1	None	No Lane Change Requested	False
-2.0	None	No Lane Change Requested	False
-1.9	None	No Lane Change Requested	False
-1.8	None	No Lane Change Requested	False
-1.7	None	No Lane Change Requested	False
-1.6	None	No Lane Change Requested	False
-1.5	None	No Lane Change Requested	False
-1.4	None	No Lane Change Requested	False
-1.3	None	No Lane Change Requested	False
-1.2	None	No Lane Change Requested	False
-1.1	None	No Lane Change Requested	False

Time (sec)	LCC Light Bar Flash Rate	Lane Change Request State	LCC Steering Request Active
-1.0	None	No Lane Change Requested	False
-0.9	None	No Lane Change Requested	False
-0.8	None	No Lane Change Requested	False
-0.7	None	No Lane Change Requested	False
-0.6	None	No Lane Change Requested	False
-0.5	None	No Lane Change Requested	False
-0.4	None	No Lane Change Requested	False
-0.3	None	No Lane Change Requested	False
-0.2	None	No Lane Change Requested	False
-0.1	None	No Lane Change Requested	False
0.0	None	No Lane Change Requested	False
0.1	None	No Lane Change Requested	False
0.2	None	No Lane Change Requested	False
0.3	None	No Lane Change Requested	False
0.4	None	No Lane Change Requested	False
0.5	None	No Lane Change Requested	False
0.6	None	No Lane Change Requested	False
0.7	None	No Lane Change Requested	False
0.8	None	No Lane Change Requested	False
0.9	None	No Lane Change Requested	False

Time (sec)	LCC Light Bar Flash Rate	Lane Change Request State	LCC Steering Request Active
1.0	None	No Lane Change Requested	False
1.1	None	No Lane Change Requested	False
1.2	None	No Lane Change Requested	False
1.3	None	No Lane Change Requested	False
1.4	None	No Lane Change Requested	False
1.5	None	No Lane Change Requested	False
1.6	None	No Lane Change Requested	False
1.7	None	No Lane Change Requested	False
1.8	None	No Lane Change Requested	False
1.9	None	No Lane Change Requested	False
2.0	None	No Lane Change Requested	False
2.1	None	No Lane Change Requested	False
2.2	None	No Lane Change Requested	False
2.3	None	No Lane Change Requested	False
2.4	None	No Lane Change Requested	False
2.5	None	No Lane Change Requested	False
2.6	None	No Lane Change Requested	False
2.7	None	No Lane Change Requested	False
2.8	None	No Lane Change Requested	False
2.9	None	No Lane Change Requested	False

Time (sec)	LCC Light Bar Flash Rate	Lane Change Request State	LCC Steering Request Active
3.0	None	No Lane Change Requested	False

Event Data (500 ms) (Record 3 - FPB Alert Event) - Table 1 of 23

Time (sec)	Transmission Estimated Gear	Engine RPM (Engine Speed) (rpm)	Vehicle Motion Movement State	Logistics Mode Active	Turn Signal Switch Active
-4.5	Gear 2	825	Forward	False	None
-4.0	Gear 2	765	Forward	False	None
-3.5	Gear 2	690	Forward	False	None
-3.0	Gear 2	651	Forward	False	None
-2.5	Gear 2	649	Forward	False	None
-2.0	Gear 2	726	Forward	False	None
-1.5	Gear 2	831	Forward	False	None
-1.0	Gear 1	713	Forward	False	None
-0.5	Gear 1	705	Forward	False	None
0.0	Gear 1	742	Forward	False	None
0.5	Gear 1	777	Forward	False	None
1.0	Gear 1	719	Forward	False	None
1.5	Gear 1	627	Forward	False	None
2.0	Gear 1	595	Forward	False	None
2.5	Gear 1	599	Forward	False	None
3.0	Gear 1	603	Forward	False	None

Event Data (500 ms) (Record 3 - FPB Alert Event) - Table 2 of 23

Time (sec)	Teen Driver Mode Active	SDM Event Enabled	Driver Selected Trailer Present	Electronic Stability Control Status	Electronic Stability Control Active
-4.5	False	False	False	Normal Operation	False
-4.0	False	False	False	Normal Operation	False
-3.5	False	False	False	Normal Operation	False
-3.0	False	False	False	Normal Operation	False
-2.5	False	False	False	Normal Operation	False
-2.0	False	False	False	Normal Operation	False
-1.5	False	False	False	Normal Operation	False
-1.0	False	False	False	Normal Operation	False
-0.5	False	False	False	Normal Operation	False
0.0	False	False	False	Normal Operation	False
0.5	False	False	False	Normal Operation	False
1.0	False	False	False	Normal Operation	False
1.5	False	False	False	Normal Operation	False
2.0	False	False	False	Normal Operation	False
2.5	False	False	False	Normal Operation	False
3.0	False	False	False	Normal Operation	False

Event Data (500 ms) (Record 3 - FPB Alert Event) - Table 3 of 23

Time (sec)	Park Brake System Status	FCA Driver Inhibit Active	Forward Collision System Off Request Status	AEB System Off Request Status	FCA Enable Status
-4.5	Released	True	False	False	True
-4.0	Released	True	False	False	True
-3.5	Released	True	False	False	True
-3.0	Released	True	False	False	True
-2.5	Released	True	False	False	True
-2.0	Released	True	False	False	True
-1.5	Released	True	False	False	True
-1.0	Released	True	False	False	True
-0.5	Released	True	False	False	True
0.0	Released	True	False	False	True
0.5	Released	True	False	False	True
1.0	Released	True	False	False	True
1.5	Released	True	False	False	True
2.0	Released	True	False	False	True
2.5	Released	True	False	False	True
3.0	Released	True	False	False	True

Event Data (500 ms) (Record 3 - FPB Alert Event) - Table 4 of 23

Time (sec)	Forward Collision System Unavailable Request Status	AEB Driver Inhibit Active	AEB Driver Override Active	AEB Enable Status	FPB Driver Inhibit Active
-4.5	False	All	False	True	True
-4.0	False	All	False	True	True
-3.5	False	All	False	True	True
-3.0	False	All	False	True	True
-2.5	False	All	False	True	True
-2.0	False	None	False	True	False
-1.5	False	None	False	True	False
-1.0	False	None	False	True	False
-0.5	False	None	False	True	False
0.0	False	None	False	True	False
0.5	False	None	False	True	False
1.0	False	None	False	True	False
1.5	False	None	False	True	False
2.0	False	AEB	False	True	True
2.5	False	AEB	False	False	True
3.0	False	AEB	False	False	True

Event Data (500 ms) (Record 3 - FPB Alert Event) - Table 5 of 23

Time (sec)	FPB Driver Override Active	FPB Enable Status	LKA Customer Setting	LKA Driver Inhibit Active	LKA Driver Override Active
-4.5	False	True	Off	True	False
-4.0	False	True	Off	True	False
-3.5	False	True	Off	True	False
-3.0	False	True	Off	True	False
-2.5	False	True	Off	True	False
-2.0	False	True	Off	True	False
-1.5	False	True	Off	True	False
-1.0	False	True	Off	True	False
-0.5	False	True	Off	True	False
0.0	False	True	Off	True	False
0.5	False	True	Off	True	False
1.0	False	True	Off	True	False
1.5	False	True	Off	True	False
2.0	False	False	Off	True	False
2.5	False	False	Off	True	False
3.0	False	False	Off	True	False

Event Data (500 ms) (Record 3 - FPB Alert Event) - Table 6 of 23

Time (sec)	Construction Area Detection Status	Driver Attention Operational Status	Driver Attention Confidence Level	ACC Go Notifier Active	LCC HMI Alert Request Status
-4.5	False	Unknown	0	Not Stopped	Off
-4.0	False	Unknown	0	Not Stopped	Off
-3.5	False	Unknown	0	Not Stopped	Off
-3.0	False	Unknown	0	Not Stopped	Off
-2.5	False	Unknown	0	Not Stopped	Off
-2.0	False	Unknown	0	Not Stopped	Off
-1.5	False	Unknown	0	Not Stopped	Off
-1.0	False	Unknown	0	Not Stopped	Off
-0.5	False	Unknown	0	Not Stopped	Off
0.0	False	Unknown	0	Not Stopped	Off
0.5	False	Unknown	0	Not Stopped	Off
1.0	False	Unknown	0	Not Stopped	Off
1.5	False	Unknown	0	Not Stopped	Off
2.0	False	Unknown	0	Not Stopped	Off
2.5	False	Unknown	0	Not Stopped	Off
3.0	False	Unknown	0	Not Stopped	Off

Event Data (500 ms) (Record 3 - FPB Alert Event) - Table 7 of 23

Time (sec)	Left Lane Location 0 ID	Left Lane Location 1 ID	Left Lane Location 2 ID	Left Lane Location 3 ID	Left Lane Location 4 ID
-4.5	0	0	0	0	0
-4.0	0	0	0	0	0
-3.5	0	0	0	0	0
-3.0	0	0	0	0	0
-2.5	0	0	0	0	0
-2.0	0	0	0	0	0
-1.5	0	0	0	0	0
-1.0	0	0	0	0	0
-0.5	0	0	0	0	0
0.0	0	0	0	0	0
0.5	0	0	0	0	0
1.0	0	0	0	0	0
1.5	0	0	0	0	0
2.0	0	0	0	0	0
2.5	0	0	0	0	0
3.0	0	0	0	0	0

Event Data (500 ms) (Record 3 - FPB Alert Event) - Table 8 of 23

Time (sec)	Left Lane Location 5 ID	Left Lane Location 6 ID	Left Lane Location 7 ID	Right Lane Location 0 ID	Right Lane Location 1 ID
-4.5	0	0	0	0	0
-4.0	0	0	0	0	0
-3.5	0	0	0	0	0
-3.0	0	0	0	0	0
-2.5	0	0	0	0	0
-2.0	0	0	0	0	0
-1.5	0	0	0	0	0
-1.0	0	0	0	0	0
-0.5	0	0	0	0	0
0.0	0	0	0	0	0
0.5	0	0	0	0	0
1.0	0	0	0	0	0
1.5	0	0	0	0	0
2.0	0	0	0	0	0
2.5	0	0	0	0	0
3.0	0	0	0	0	0

Event Data (500 ms) (Record 3 - FPB Alert Event) - Table 9 of 23

Time (sec)	Right Lane Location 2 ID	Right Lane Location 3 ID	Right Lane Location 4 ID	Right Lane Location 5 ID	Right Lane Location 6 ID
-4.5	0	0	0	0	0
-4.0	0	0	0	0	0
-3.5	0	0	0	0	0
-3.0	0	0	0	0	0
-2.5	0	0	0	0	0
-2.0	0	0	0	0	0
-1.5	0	0	0	0	0
-1.0	0	0	0	0	0
-0.5	0	0	0	0	0
0.0	0	0	0	0	0
0.5	0	0	0	0	0
1.0	0	0	0	0	0
1.5	0	0	0	0	0
2.0	0	0	0	0	0
2.5	0	0	0	0	0
3.0	0	0	0	0	0

Event Data (500 ms) (Record 3 - FPB Alert Event) - Table 10 of 23

Time (sec)	Right Lane Location 7 ID	Left Lane Location 0 Type	Left Lane Location 1 Type	Left Lane Location 2 Type	Left Lane Location 3 Type
-4.5	0	Unknown	Unknown	Unknown	Unknown
-4.0	0	Unknown	Unknown	Unknown	Unknown
-3.5	0	Unknown	Unknown	Unknown	Unknown
-3.0	0	Unknown	Unknown	Unknown	Unknown
-2.5	0	Unknown	Unknown	Unknown	Unknown
-2.0	0	Unknown	Unknown	Unknown	Unknown
-1.5	0	Unknown	Unknown	Unknown	Unknown
-1.0	0	Unknown	Unknown	Unknown	Unknown
-0.5	0	Unknown	Unknown	Unknown	Unknown
0.0	0	Unknown	Unknown	Unknown	Unknown
0.5	0	Unknown	Unknown	Unknown	Unknown
1.0	0	Unknown	Unknown	Unknown	Unknown
1.5	0	Unknown	Unknown	Unknown	Unknown
2.0	0	Unknown	Unknown	Unknown	Unknown
2.5	0	Unknown	Unknown	Unknown	Unknown
3.0	0	Unknown	Unknown	Unknown	Unknown

Event Data (500 ms) (Record 3 - FPB Alert Event) - Table 11 of 23

Time (sec)	Left Lane Location 4 Type	Left Lane Location 5 Type	Left Lane Location 6 Type	Left Lane Location 7 Type	Right Lane Location 0 Type
-4.5	Unknown	Unknown	Unknown	Unknown	Unknown
-4.0	Unknown	Unknown	Unknown	Unknown	Unknown
-3.5	Unknown	Unknown	Unknown	Unknown	Unknown
-3.0	Unknown	Unknown	Unknown	Unknown	Unknown
-2.5	Unknown	Unknown	Unknown	Unknown	Unknown
-2.0	Unknown	Unknown	Unknown	Unknown	Unknown
-1.5	Unknown	Unknown	Unknown	Unknown	Unknown
-1.0	Unknown	Unknown	Unknown	Unknown	Unknown
-0.5	Unknown	Unknown	Unknown	Unknown	Unknown
0.0	Unknown	Unknown	Unknown	Unknown	Unknown
0.5	Unknown	Unknown	Unknown	Unknown	Unknown
1.0	Unknown	Unknown	Unknown	Unknown	Unknown
1.5	Unknown	Unknown	Unknown	Unknown	Unknown
2.0	Unknown	Unknown	Unknown	Unknown	Unknown
2.5	Unknown	Unknown	Unknown	Unknown	Unknown
3.0	Unknown	Unknown	Unknown	Unknown	Unknown

Event Data (500 ms) (Record 3 - FPB Alert Event) - Table 12 of 23

Time (sec)	Right Lane Location 1 Type	Right Lane Location 2 Type	Right Lane Location 3 Type	Right Lane Location 4 Type	Right Lane Location 5 Type
-4.5	Unknown	Unknown	Unknown	Unknown	Unknown
-4.0	Unknown	Unknown	Unknown	Unknown	Unknown
-3.5	Unknown	Unknown	Unknown	Unknown	Unknown
-3.0	Unknown	Unknown	Unknown	Unknown	Unknown
-2.5	Unknown	Unknown	Unknown	Unknown	Unknown
-2.0	Unknown	Unknown	Unknown	Unknown	Unknown
-1.5	Unknown	Unknown	Unknown	Unknown	Unknown
-1.0	Unknown	Unknown	Unknown	Unknown	Unknown
-0.5	Unknown	Unknown	Unknown	Unknown	Unknown
0.0	Unknown	Unknown	Unknown	Unknown	Unknown
0.5	Unknown	Unknown	Unknown	Unknown	Unknown
1.0	Unknown	Unknown	Unknown	Unknown	Unknown
1.5	Unknown	Unknown	Unknown	Unknown	Unknown
2.0	Unknown	Unknown	Unknown	Unknown	Unknown
2.5	Unknown	Unknown	Unknown	Unknown	Unknown
3.0	Unknown	Unknown	Unknown	Unknown	Unknown

Event Data (500 ms) (Record 3 - FPB Alert Event) - Table 13 of 23

Time (sec)	Right Lane Location 6 Type	Right Lane Location 7 Type	Left Lane Location 0 Longitudinal Distance (m)	Left Lane Location 1 Longitudinal Distance (m)	Left Lane Location 2 Longitudinal Distance (m)
-4.5	Unknown	Unknown	199.98	199.98	199.98
-4.0	Unknown	Unknown	199.98	199.98	199.98
-3.5	Unknown	Unknown	199.98	199.98	199.98
-3.0	Unknown	Unknown	199.98	199.98	199.98
-2.5	Unknown	Unknown	199.98	199.98	199.98
-2.0	Unknown	Unknown	199.98	199.98	199.98
-1.5	Unknown	Unknown	199.98	199.98	199.98
-1.0	Unknown	Unknown	199.98	199.98	199.98
-0.5	Unknown	Unknown	199.98	199.98	199.98
0.0	Unknown	Unknown	199.98	199.98	199.98
0.5	Unknown	Unknown	199.98	199.98	199.98
1.0	Unknown	Unknown	199.98	199.98	199.98
1.5	Unknown	Unknown	199.98	199.98	199.98
2.0	Unknown	Unknown	199.98	199.98	199.98
2.5	Unknown	Unknown	199.98	199.98	199.98
3.0	Unknown	Unknown	199.98	199.98	199.98

Event Data (500 ms) (Record 3 - FPB Alert Event) - Table 14 of 23

Time (sec)	Left Lane Location 3 Longitudinal Distance (m)	Left Lane Location 4 Longitudinal Distance (m)	Left Lane Location 5 Longitudinal Distance (m)	Left Lane Location 6 Longitudinal Distance (m)	Left Lane Location 7 Longitudinal Distance (m)
-4.5	199.98	199.98	199.98	199.98	199.98
-4.0	199.98	199.98	199.98	199.98	199.98
-3.5	199.98	199.98	199.98	199.98	199.98
-3.0	199.98	199.98	199.98	199.98	199.98
-2.5	199.98	199.98	199.98	199.98	199.98
-2.0	199.98	199.98	199.98	199.98	199.98
-1.5	199.98	199.98	199.98	199.98	199.98
-1.0	199.98	199.98	199.98	199.98	199.98
-0.5	199.98	199.98	199.98	199.98	199.98
0.0	199.98	199.98	199.98	199.98	199.98
0.5	199.98	199.98	199.98	199.98	199.98
1.0	199.98	199.98	199.98	199.98	199.98
1.5	199.98	199.98	199.98	199.98	199.98
2.0	199.98	199.98	199.98	199.98	199.98
2.5	199.98	199.98	199.98	199.98	199.98
3.0	199.98	199.98	199.98	199.98	199.98

Event Data (500 ms) (Record 3 - FPB Alert Event) - Table 15 of 23

Time (sec)	Right Lane Location 0 Longitudinal Distance (m)	Right Lane Location 1 Longitudinal Distance (m)	Right Lane Location 2 Longitudinal Distance (m)	Right Lane Location 3 Longitudinal Distance (m)	Right Lane Location 4 Longitudinal Distance (m)
-4.5	199.98	199.98	199.98	199.98	199.98
-4.0	199.98	199.98	199.98	199.98	199.98
-3.5	199.98	199.98	199.98	199.98	199.98
-3.0	199.98	199.98	199.98	199.98	199.98
-2.5	199.98	199.98	199.98	199.98	199.98
-2.0	199.98	199.98	199.98	199.98	199.98
-1.5	199.98	199.98	199.98	199.98	199.98
-1.0	199.98	199.98	199.98	199.98	199.98
-0.5	199.98	199.98	199.98	199.98	199.98
0.0	199.98	199.98	199.98	199.98	199.98
0.5	199.98	199.98	199.98	199.98	199.98
1.0	199.98	199.98	199.98	199.98	199.98
1.5	199.98	199.98	199.98	199.98	199.98
2.0	199.98	199.98	199.98	199.98	199.98
2.5	199.98	199.98	199.98	199.98	199.98
3.0	199.98	199.98	199.98	199.98	199.98

Event Data (500 ms) (Record 3 - FPB Alert Event) - Table 16 of 23

Time (sec)	Right Lane Location 5 Longitudinal Distance (m)	Right Lane Location 6 Longitudinal Distance (m)	Right Lane Location 7 Longitudinal Distance (m)	Left Lane Location 0 Longitudinal Velocity (m/s)	Left Lane Location 1 Longitudinal Velocity (m/s)
-4.5	199.98	199.98	199.98	0.00	0.00
-4.0	199.98	199.98	199.98	0.00	0.00
-3.5	199.98	199.98	199.98	0.00	0.00
-3.0	199.98	199.98	199.98	0.00	0.00
-2.5	199.98	199.98	199.98	0.00	0.00
-2.0	199.98	199.98	199.98	0.00	0.00
-1.5	199.98	199.98	199.98	0.00	0.00
-1.0	199.98	199.98	199.98	0.00	0.00
-0.5	199.98	199.98	199.98	0.00	0.00
0.0	199.98	199.98	199.98	0.00	0.00
0.5	199.98	199.98	199.98	0.00	0.00
1.0	199.98	199.98	199.98	0.00	0.00
1.5	199.98	199.98	199.98	0.00	0.00
2.0	199.98	199.98	199.98	0.00	0.00
2.5	199.98	199.98	199.98	0.00	0.00
3.0	199.98	199.98	199.98	0.00	0.00

Event Data (500 ms) (Record 3 - FPB Alert Event) - Table 17 of 23

Time (sec)	Left Lane Location 2 Longitudinal Velocity (m/s)	Left Lane Location 3 Longitudinal Velocity (m/s)	Left Lane Location 4 Longitudinal Velocity (m/s)	Left Lane Location 5 Longitudinal Velocity (m/s)	Left Lane Location 6 Longitudinal Velocity (m/s)
-4.5	0.00	0.00	0.00	0.00	0.00
-4.0	0.00	0.00	0.00	0.00	0.00
-3.5	0.00	0.00	0.00	0.00	0.00
-3.0	0.00	0.00	0.00	0.00	0.00
-2.5	0.00	0.00	0.00	0.00	0.00
-2.0	0.00	0.00	0.00	0.00	0.00
-1.5	0.00	0.00	0.00	0.00	0.00
-1.0	0.00	0.00	0.00	0.00	0.00
-0.5	0.00	0.00	0.00	0.00	0.00
0.0	0.00	0.00	0.00	0.00	0.00
0.5	0.00	0.00	0.00	0.00	0.00
1.0	0.00	0.00	0.00	0.00	0.00
1.5	0.00	0.00	0.00	0.00	0.00
2.0	0.00	0.00	0.00	0.00	0.00
2.5	0.00	0.00	0.00	0.00	0.00
3.0	0.00	0.00	0.00	0.00	0.00

Event Data (500 ms) (Record 3 - FPB Alert Event) - Table 18 of 23

Time (sec)	Left Lane Location 7 Longitudinal Velocity (m/s)	Right Lane Location 0 Longitudinal Velocity (m/s)	Right Lane Location 1 Longitudinal Velocity (m/s)	Right Lane Location 2 Longitudinal Velocity (m/s)	Right Lane Location 3 Longitudinal Velocity (m/s)
-4.5	0.00	0.00	0.00	0.00	0.00
-4.0	0.00	0.00	0.00	0.00	0.00
-3.5	0.00	0.00	0.00	0.00	0.00
-3.0	0.00	0.00	0.00	0.00	0.00
-2.5	0.00	0.00	0.00	0.00	0.00
-2.0	0.00	0.00	0.00	0.00	0.00
-1.5	0.00	0.00	0.00	0.00	0.00
-1.0	0.00	0.00	0.00	0.00	0.00
-0.5	0.00	0.00	0.00	0.00	0.00
0.0	0.00	0.00	0.00	0.00	0.00
0.5	0.00	0.00	0.00	0.00	0.00
1.0	0.00	0.00	0.00	0.00	0.00
1.5	0.00	0.00	0.00	0.00	0.00
2.0	0.00	0.00	0.00	0.00	0.00
2.5	0.00	0.00	0.00	0.00	0.00
3.0	0.00	0.00	0.00	0.00	0.00

Event Data (500 ms) (Record 3 - FPB Alert Event) - Table 19 of 23

Time (sec)	Right Lane Location 4 Longitudinal Velocity (m/s)	Right Lane Location 5 Longitudinal Velocity (m/s)	Right Lane Location 6 Longitudinal Velocity (m/s)	Right Lane Location 7 Longitudinal Velocity (m/s)	Left Lane Location 0 Lateral Distance (m)
-4.5	0.00	0.00	0.00	0.00	0.00
-4.0	0.00	0.00	0.00	0.00	0.00
-3.5	0.00	0.00	0.00	0.00	0.00
-3.0	0.00	0.00	0.00	0.00	0.00
-2.5	0.00	0.00	0.00	0.00	0.00
-2.0	0.00	0.00	0.00	0.00	0.00
-1.5	0.00	0.00	0.00	0.00	0.00
-1.0	0.00	0.00	0.00	0.00	0.00
-0.5	0.00	0.00	0.00	0.00	0.00
0.0	0.00	0.00	0.00	0.00	0.00
0.5	0.00	0.00	0.00	0.00	0.00
1.0	0.00	0.00	0.00	0.00	0.00
1.5	0.00	0.00	0.00	0.00	0.00
2.0	0.00	0.00	0.00	0.00	0.00
2.5	0.00	0.00	0.00	0.00	0.00
3.0	0.00	0.00	0.00	0.00	0.00

Event Data (500 ms) (Record 3 - FPB Alert Event) - Table 20 of 23

Time (sec)	Left Lane Location 1 Lateral Distance (m)	Left Lane Location 2 Lateral Distance (m)	Left Lane Location 3 Lateral Distance (m)	Left Lane Location 4 Lateral Distance (m)	Left Lane Location 5 Lateral Distance (m)
-4.5	0.00	0.00	0.00	0.00	0.00
-4.0	0.00	0.00	0.00	0.00	0.00
-3.5	0.00	0.00	0.00	0.00	0.00
-3.0	0.00	0.00	0.00	0.00	0.00
-2.5	0.00	0.00	0.00	0.00	0.00
-2.0	0.00	0.00	0.00	0.00	0.00
-1.5	0.00	0.00	0.00	0.00	0.00
-1.0	0.00	0.00	0.00	0.00	0.00
-0.5	0.00	0.00	0.00	0.00	0.00
0.0	0.00	0.00	0.00	0.00	0.00
0.5	0.00	0.00	0.00	0.00	0.00
1.0	0.00	0.00	0.00	0.00	0.00
1.5	0.00	0.00	0.00	0.00	0.00
2.0	0.00	0.00	0.00	0.00	0.00
2.5	0.00	0.00	0.00	0.00	0.00
3.0	0.00	0.00	0.00	0.00	0.00

Event Data (500 ms) (Record 3 - FPB Alert Event) - Table 21 of 23

Time (sec)	Left Lane Location 6 Lateral Distance (m)	Left Lane Location 7 Lateral Distance (m)	Right Lane Location 0 Lateral Distance (m)	Right Lane Location 1 Lateral Distance (m)	Right Lane Location 2 Lateral Distance (m)
-4.5	0.00	0.00	0.00	0.00	0.00
-4.0	0.00	0.00	0.00	0.00	0.00
-3.5	0.00	0.00	0.00	0.00	0.00
-3.0	0.00	0.00	0.00	0.00	0.00
-2.5	0.00	0.00	0.00	0.00	0.00
-2.0	0.00	0.00	0.00	0.00	0.00
-1.5	0.00	0.00	0.00	0.00	0.00
-1.0	0.00	0.00	0.00	0.00	0.00
-0.5	0.00	0.00	0.00	0.00	0.00
0.0	0.00	0.00	0.00	0.00	0.00
0.5	0.00	0.00	0.00	0.00	0.00
1.0	0.00	0.00	0.00	0.00	0.00
1.5	0.00	0.00	0.00	0.00	0.00
2.0	0.00	0.00	0.00	0.00	0.00
2.5	0.00	0.00	0.00	0.00	0.00
3.0	0.00	0.00	0.00	0.00	0.00

Event Data (500 ms) (Record 3 - FPB Alert Event) - Table 22 of 23

Time (sec)	Right Lane Location 3 Lateral Distance (m)	Right Lane Location 4 Lateral Distance (m)	Right Lane Location 5 Lateral Distance (m)	Right Lane Location 6 Lateral Distance (m)	Right Lane Location 7 Lateral Distance (m)
-4.5	0.00	0.00	0.00	0.00	0.00
-4.0	0.00	0.00	0.00	0.00	0.00
-3.5	0.00	0.00	0.00	0.00	0.00
-3.0	0.00	0.00	0.00	0.00	0.00
-2.5	0.00	0.00	0.00	0.00	0.00
-2.0	0.00	0.00	0.00	0.00	0.00
-1.5	0.00	0.00	0.00	0.00	0.00
-1.0	0.00	0.00	0.00	0.00	0.00
-0.5	0.00	0.00	0.00	0.00	0.00
0.0	0.00	0.00	0.00	0.00	0.00
0.5	0.00	0.00	0.00	0.00	0.00
1.0	0.00	0.00	0.00	0.00	0.00
1.5	0.00	0.00	0.00	0.00	0.00
2.0	0.00	0.00	0.00	0.00	0.00
2.5	0.00	0.00	0.00	0.00	0.00
3.0	0.00	0.00	0.00	0.00	0.00

Event Data (500 ms) (Record 3 - FPB Alert Event) - Table 23 of 23

Time (sec)	Steering Assist Request Type
-4.5	No Request
-4.0	No Request
-3.5	No Request
-3.0	No Request
-2.5	No Request
-2.0	No Request
-1.5	No Request
-1.0	No Request
-0.5	No Request
0.0	No Request
0.5	No Request
1.0	No Request
1.5	No Request
2.0	No Request
2.5	No Request
3.0	No Request

■ Vehicle Information

HYUNDAI I IONIQ 5(NE EV) 2022 AIR BAG SYSTEM	
VIN as Programmed into EMS	

■ Additional Information

User-entered VIN	KM8KRDAF0PU*****
User Name	
Case Number	
Crash Date	
Saved-on Date	2023-08-14 13:57
EDR Tool Version	E-P-H-01-00-0058
EDR Report Version	EDR002-R01
Tire Size(s)	
Memo	

■ Data Limitation

General Information:

Tools for downloading and interpreting the EDRs in Hyundai vehicles have been developed for vehicles produced after September 1, 2012. Currently, there is no tool for downloading and accurate interpreting data from the EDRs in Hyundai vehicles produced prior to this date.

The EDR Report requires Adobe Reader Version 9.00 or higher to open.

EDR(Event Data Recorder):

- The EDR function is part of the Air bag Control Unit(ACU).
- ACU can store up to two events.
- Event means a crash or other physical occurrence that causes the trigger threshold to be met or exceeded, or any non-reversible deployable restraint to be deployed, whichever occurs first:
 - 1. Deployment Event:
 - 1) the event which is recorded if an air bag is commanded to deploy.
 - 2) the event is locked and cannot be overwritten.
 - 2. Non-deployment Event:
 - 1) the event which is recorded, but in which an air bag is not commanded to deploy
 - 2) the event is not locked and can be overwritten by a subsequent event (Deployment or Non-deployment event), for example, Pretensioner(s) only deployment
 - 3) An example of a non-deployment event is a pretensioner-only deployment with no air bag deployments
- Ignition cycle count will increment by 1 in the following cases
 - 1. the power mode change from OFF/Accessory to IGN ON/RUN
 - 2. EDR data download by tools
- The ACU can record data for all or some of the following events. But, depending on the vehicle's configurations, data for side crash and/or rollover crash(event) may not be recorded.
- If power supply to the ACU is lost during an event, all or part of the data may not be recorded.

Data Limitation

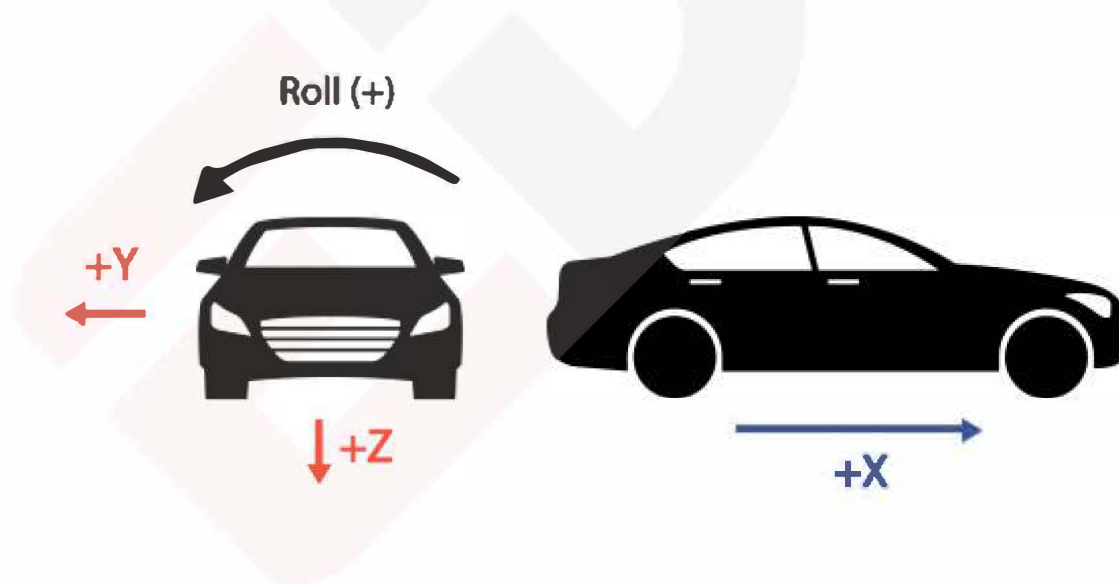
Data Element Sign Convention:

The following table provides an explanation of the sign notation for data elements that may be included in the EDR report. Directional references to sign convention are from the point of view of the driver.

Data element name	Positive sign	Note
* Longitudinal acceleration	Forward direction	+X at the figure 1
Delta V, longitudinal	Forward direction	+X at the figure 1
Lateral acceleration	Left to Right direction	+Y at the figure 1
Delta V, lateral	Left to Right direction	+Y at the figure 1
Normal(vertical) acceleration	Downward direction	+Z at the figure 1
Vehicle roll angle	Clockwise about the longitudinal axis	Roll(+) at the figure 1
Vehicle roll rat	Clockwise about the longitudinal axis	Roll(+) at the figure 1
Steering input	Counterclockwise rotation	-

* The forward direction of longitudinal acceleration for front side impact sensor may be different for each vehicle

Figure 1. Sign Conventions



Data Limitation

Data Sources:

Many EDR data elements are sourced from other control modules in the vehicle.

1. Most of them can be measured and calculated by the ACU. For example, Delta-V and Rollover angle can be calculated from internal sensors in the ACU (if applicable).
2. The following pre-crash data can be transmitted to the ACU via the vehicle's communication network.
 - Speed, Vehicle indicated
 - Engine rpm
 - Engine Throttle, % full
 - Acceleration Pedal
 - Master cylinder pressure
 - Service Brake, on/off
 - Anti-lock braking system activity
 - Stability Control
 - Steering Input
 - Gear shift selector display
 - Smart Cruise Control information (Set Speed)
 - Smart Cruise Control information (SPEED UNIT)
 - Smart Cruise Control information (Mode status)
 - Smart Cruise Control information (Fail info)
 - Forward Collision-Avoidance Assist (Function status)
 - Forward Collision-Avoidance Assist (Warning Level)
 - Forward Collision-Avoidance Assist (Fail info)
 - Forward Collision-Avoidance Assist-JC (Function status)

*Note) Depending on the vehicle's configuration and the conditions described above, some items may not be recorded.
3. Pre-crash data is recorded in discrete intervals. Due to different refresh rates within the vehicle's electronics, the data recorded may be asynchronous to each other.

Data Limitation

Data Definitions:

- Data recorded by the ACU and imaged by the EDR tool is displayed relative to Time zero(T0). Time zero(T0) is not typically the time at which the vehicle made contact with another vehicle or object.
- Time zero (T0) means whichever of the following occurs first
 1. For systems with “wake-up” air bag control systems, the time at which the occupant restraint control algorithm is activated; or
 2. For continuously running algorithms,
 - 1) The first point in the interval where a longitudinal cumulative delta-V of over 0.8 km/h (0.5 mph) is reached within a 20msec time period; or
 - 2) For vehicles that record “delta-V, lateral,” the first point in the interval where a lateral cumulative delta-V of over 0.8 km/h (0.5 mph) is reached within a 5msec time period; or
 3. Deployment of a non-reversible deployable restraint.
- Multi-event crash means the occurrence of 2 events, the first and last of which begin not more than 5 seconds apart. If an event is not part of a multi-event crash, the value of this data element will be “1”.
- Service brake, on or off means the status of the device that is installed in or connected to the brake pedal system to detect whether the pedal was pressed. The device can include the brake pedal switch or other driver-operated service brake control,
- Engine RPM means
 1. For vehicles powered by internal combustion engines, the number of revolutions per minute of the main crankshaft of the vehicle's engine, and
 2. For vehicles not entirely powered by internal combustion engines, the number of revolutions per minute of the motor shaft at the point at which it enters the vehicle transmission gearbox.
- Engine Throttle is a measure of the throttle position.
- Accelerator Pedal is a measure of the accelerator pedal value.
- Seat belt status is determined by whether the buckle switch is open or closed.
- Delta-V means the cumulative change in velocity, and is calculated from internal sensors in the ACU
- 'Invalid data' means
 1. The data sources sent invalid data
 2. The data sources did not send data
 3. The data does not be recorded depending on design standard
 4. The data could not be recorded in some conditions such as the loss of power in vehicle
- 'Not supported' means : The system is not applied in that vehicle
- Master Cylinder Pressure means a measure of how deeply the brake pedal value was pressed.
- Gear Shift Selector Display means selected gear information.
- Smart Cruise Control system information means its set speed/speed unit/mode status/fail information.
- Forward Collision-avoidance Assist system information means its function status/warning level/fail information.
- Forward Collision-avoidance Assist-Junction system information means its function status.

EDR Information

Part No. (EOL Code) as programmed into ACU	95910GI100 (GI11)
ECU SW Version as programmed into ACU	1.01
EDR Version as programmed into ACU	0422

< Event 1 >

Event Status at Event

Multi-event crash, number of Event	1 event
Time from event 1 to 2 [ms]	0
Completed File Recorded (Yes or No)	YES
Ignition cycle, crash [cycle]	1815
Ignition cycle, download [cycle]	1819

Pre-Crash Information 1(-5 ~ 0 sec)

Time (sec)	Speed, Vehicle indicated [km/h]	Engine rpm [rpm]	Engine Throttle, % full [%]	Acceleration Pedal, % full [%]	Master cylinder pressure [bar]	Service Brake, on/off	Anti-lock braking system activity	Stability Control	Steering Input [deg]
-5.0	68	5300	Invalid data or Not Supported	16	0.0	OFF	OFF	ON	0
-4.5	68	5300	Invalid data or Not Supported	16	0.0	OFF	OFF	ON	5
-4.0	68	5300	Invalid data or Not Supported	17	0.0	OFF	OFF	ON	5
-3.5	67	5300	Invalid data or Not Supported	16	0.0	OFF	OFF	ON	5
-3.0	67	5200	Invalid data or Not Supported	15	0.0	OFF	OFF	ON	5
-2.5	67	5200	Invalid data or Not Supported	15	0.0	OFF	OFF	ON	5
-2.0	66	5200	Invalid data or Not Supported	15	0.0	OFF	OFF	ON	5
-1.5	66	5200	Invalid data or Not Supported	15	0.0	OFF	OFF	ON	5
-1.0	66	5100	Invalid data or Not Supported	15	0.0	OFF	OFF	ON	0
-0.5	65	5100	Invalid data or Not Supported	0	0.0	OFF	OFF	ON	0
0.0	57	4200	Invalid data or Not Supported	0	155.3	ON	ON	ON	-70

Pre-Crash Information 2 (-5 ~ 0 sec)

Time (sec)	Gear shift selector display	Smart Cruise Control information (Main switch status)	Smart Cruise Control information (Set Speed)	Smart Cruise Control information (SPEED UNIT)	Smart Cruise Control information (Mode status)	Smart Cruise Control information (Fail info)
-5.0	D	OFF	0	MPH	Ready	System without Error
-4.5	D	OFF	0	MPH	Ready	System without Error
-4.0	D	OFF	0	MPH	Ready	System without Error
-3.5	D	OFF	0	MPH	Ready	System without Error
-3.0	D	OFF	0	MPH	Ready	System without Error
-2.5	D	OFF	0	MPH	Ready	System without Error
-2.0	D	OFF	0	MPH	Ready	System without Error
-1.5	D	OFF	0	MPH	Ready	System without Error
-1.0	D	OFF	0	MPH	Ready	System without Error
-0.5	D	OFF	0	MPH	Ready	System without Error
0.0	D	OFF	0	MPH	Ready	System without Error

Pre-Crash Information 3 (-5 ~ 0 sec)

Time (sec)	Forward Collision-Avoidance Assist (Function status)	Forward Collision-Avoidance Assist (Warning Level)	Forward Collision-Avoidance Assist (Fail info)	Time (sec)	Forward Collision-Avoidance Assist (Function status)	Forward Collision-Avoidance Assist (Warning Level)	Forward Collision-Avoidance Assist (Fail info)
-5.0	ON	No Warning / Invalid or Not supported	Normal	-2.5	ON	No Warning / Invalid or Not supported	Normal
-4.9	ON	No Warning / Invalid or Not supported	Normal	-2.4	ON	No Warning / Invalid or Not supported	Normal
-4.8	ON	No Warning / Invalid or Not supported	Normal	-2.3	ON	No Warning / Invalid or Not supported	Normal
-4.7	ON	No Warning / Invalid or Not supported	Normal	-2.2	ON	No Warning / Invalid or Not supported	Normal
-4.6	ON	No Warning / Invalid or Not supported	Normal	-2.1	ON	No Warning / Invalid or Not supported	Normal
-4.5	ON	No Warning / Invalid or Not supported	Normal	-2.0	ON	No Warning / Invalid or Not supported	Normal
-4.4	ON	No Warning / Invalid or Not supported	Normal	-1.9	ON	No Warning / Invalid or Not supported	Normal
-4.3	ON	No Warning / Invalid or Not supported	Normal	-1.8	ON	No Warning / Invalid or Not supported	Normal
-4.2	ON	No Warning / Invalid or Not supported	Normal	-1.7	ON	No Warning / Invalid or Not supported	Normal
-4.1	ON	No Warning / Invalid or Not supported	Normal	-1.6	ON	No Warning / Invalid or Not supported	Normal
-4.0	ON	No Warning / Invalid or Not supported	Normal	-1.5	ON	No Warning / Invalid or Not supported	Normal
-3.9	ON	No Warning / Invalid or Not supported	Normal	-1.4	ON	No Warning / Invalid or Not supported	Normal
-3.8	ON	No Warning / Invalid or Not supported	Normal	-1.3	ON	No Warning / Invalid or Not supported	Normal
-3.7	ON	No Warning / Invalid or Not supported	Normal	-1.2	ON	No Warning / Invalid or Not supported	Normal
-3.6	ON	No Warning / Invalid or Not supported	Normal	-1.1	ON	No Warning / Invalid or Not supported	Normal
-3.5	ON	No Warning / Invalid or Not supported	Normal	-1.0	ON	No Warning / Invalid or Not supported	Normal
-3.4	ON	No Warning / Invalid or Not supported	Normal	-0.9	ON	No Warning / Invalid or Not supported	Normal
-3.3	ON	No Warning / Invalid or Not supported	Normal	-0.8	ON	No Warning / Invalid or Not supported	Normal
-3.2	ON	No Warning / Invalid or Not supported	Normal	-0.7	ON	No Warning / Invalid or Not supported	Normal
-3.1	ON	No Warning / Invalid or Not supported	Normal	-0.6	ON	No Warning / Invalid or Not supported	Normal
-3.0	ON	No Warning / Invalid or Not supported	Normal	-0.5	ON	No Warning / Invalid or Not supported	Normal
-2.9	ON	No Warning / Invalid or Not supported	Normal	-0.4	ON	No Warning / Invalid or Not supported	Normal
-2.8	ON	No Warning / Invalid or Not supported	Normal	-0.3	ON	No Warning / Invalid or Not supported	Normal
-2.7	ON	No Warning / Invalid or Not supported	Normal	-0.2	ON	No Warning / Invalid or Not supported	Normal
-2.6	ON	No Warning / Invalid or Not supported	Normal	-0.1	ON	No Warning / Invalid or Not supported	Normal
-2.5	ON	No Warning / Invalid or Not supported	Normal	0.0	ON	No Warning / Invalid or Not supported	Normal

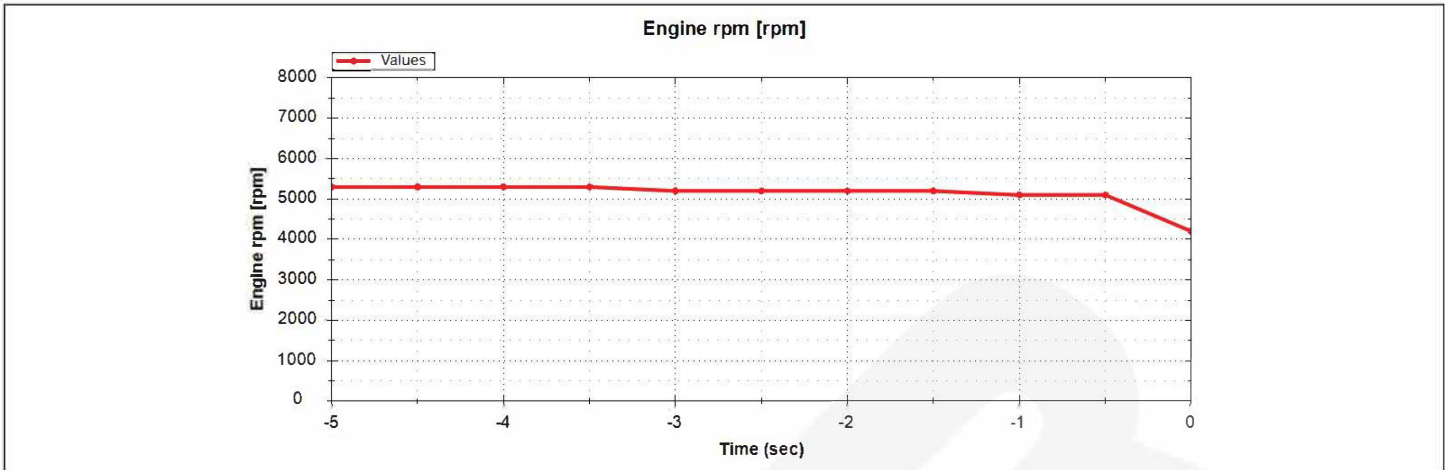
< Event 1 >

Speed, Vehicle indicated



Time (sec)	Speed, Vehicle indicated [km/h]
-5.0	68
-4.5	68
-4.0	68
-3.5	67
-3.0	67
-2.5	67
-2.0	66
-1.5	66
-1.0	66
-0.5	65
0.0	57

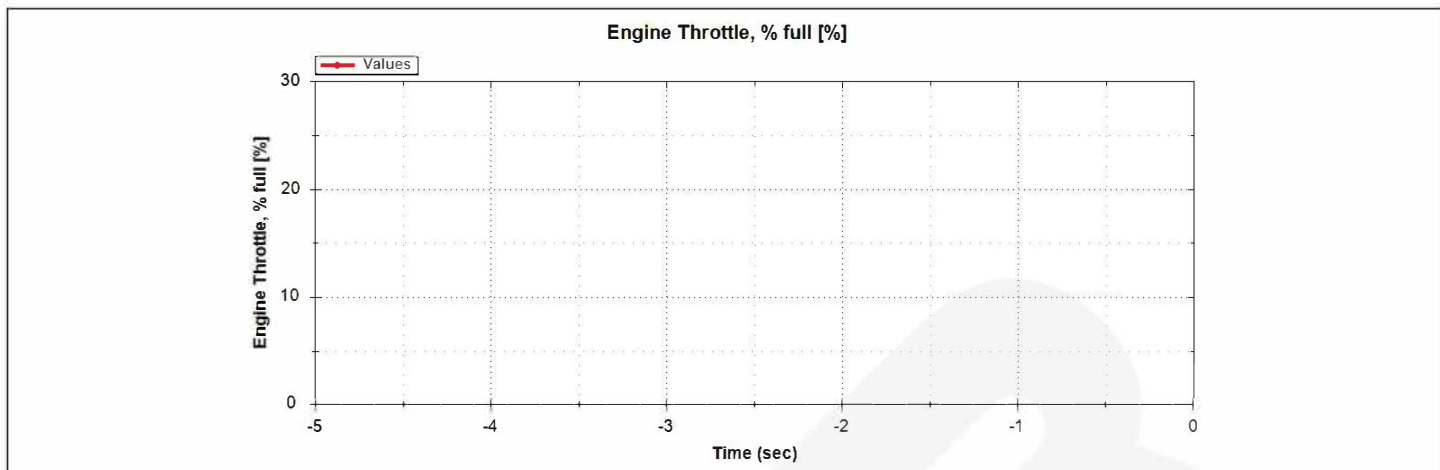
< Event 1 > Engine rpm



Time (sec)	Engine rpm [rpm]
-5.0	5300
-4.5	5300
-4.0	5300
-3.5	5300
-3.0	5200
-2.5	5200
-2.0	5200
-1.5	5200
-1.0	5100
-0.5	5100
0.0	4200

< Event 1 >

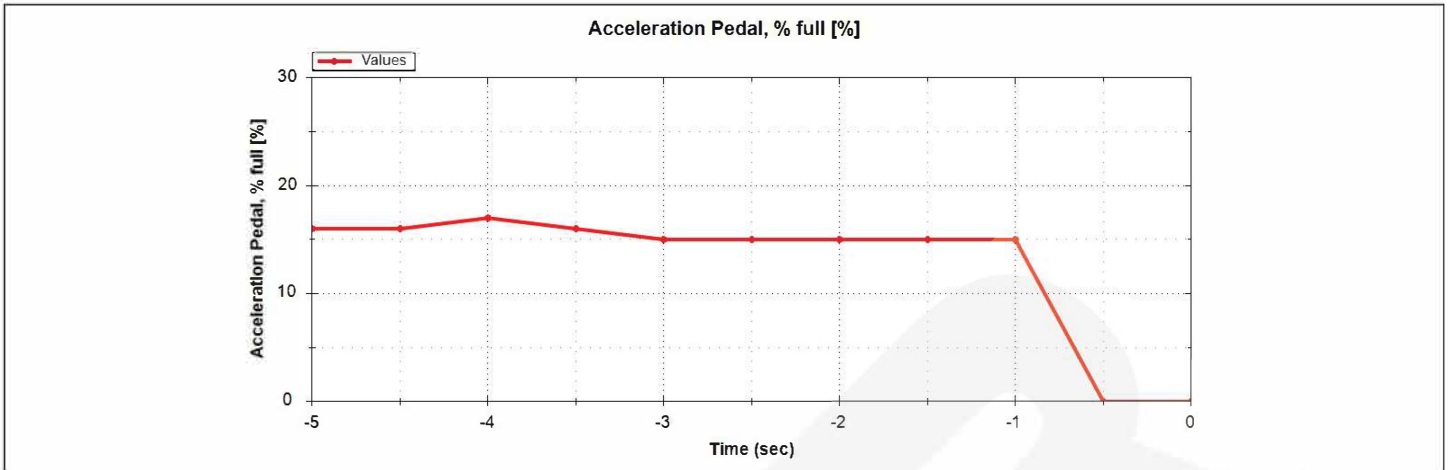
Engine Throttle, % full



Time (sec)	Engine Throttle, % full [%]
-5.0	Invalid data or Not Supported
-4.5	Invalid data or Not Supported
-4.0	Invalid data or Not Supported
-3.5	Invalid data or Not Supported
-3.0	Invalid data or Not Supported
-2.5	Invalid data or Not Supported
-2.0	Invalid data or Not Supported
-1.5	Invalid data or Not Supported
-1.0	Invalid data or Not Supported
-0.5	Invalid data or Not Supported
0.0	Invalid data or Not Supported

< Event 1 >

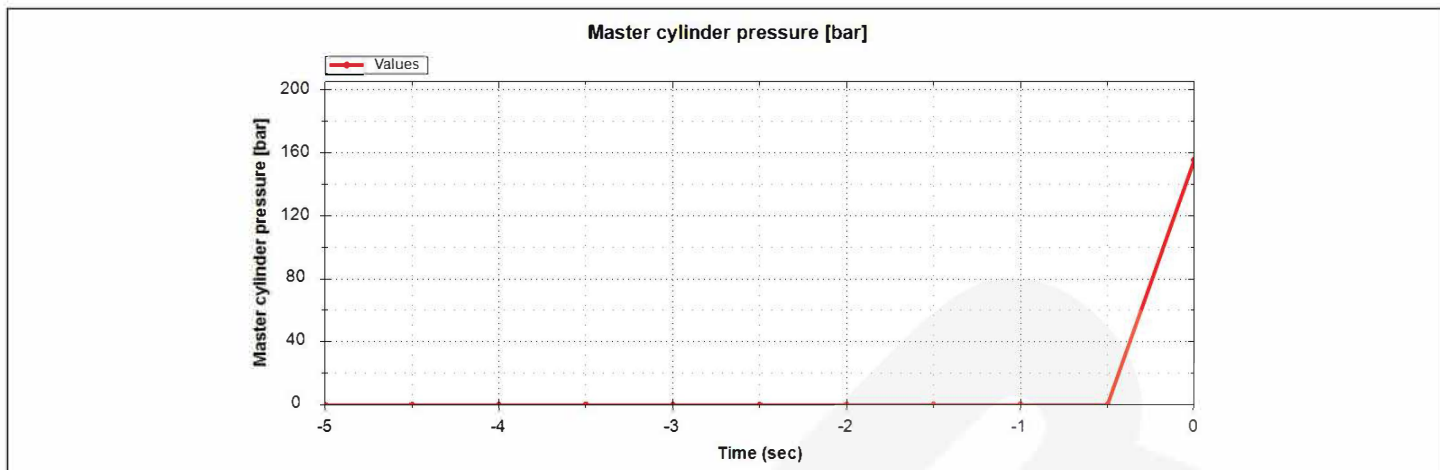
Acceleration Pedal, % full



Time (sec)	Acceleration Pedal, % full [%]
-5.0	16
-4.5	16
-4.0	17
-3.5	16
-3.0	15
-2.5	15
-2.0	15
-1.5	15
-1.0	15
-0.5	0
0.0	0

< Event 1 >

Master cylinder pressure



Time (sec)	Master cylinder pressure [bar]
-5.0	0.0
-4.5	0.0
-4.0	0.0
-3.5	0.0
-3.0	0.0
-2.5	0.0
-2.0	0.0
-1.5	0.0
-1.0	0.0
-0.5	0.0
0.0	155.3

< Event 1 >

Service Brake, on/off

Time (sec)	Service Brake, on/off
-5.0	OFF
-4.5	OFF
-4.0	OFF
-3.5	OFF
-3.0	OFF
-2.5	OFF
-2.0	OFF
-1.5	OFF
-1.0	OFF
-0.5	OFF
0.0	ON

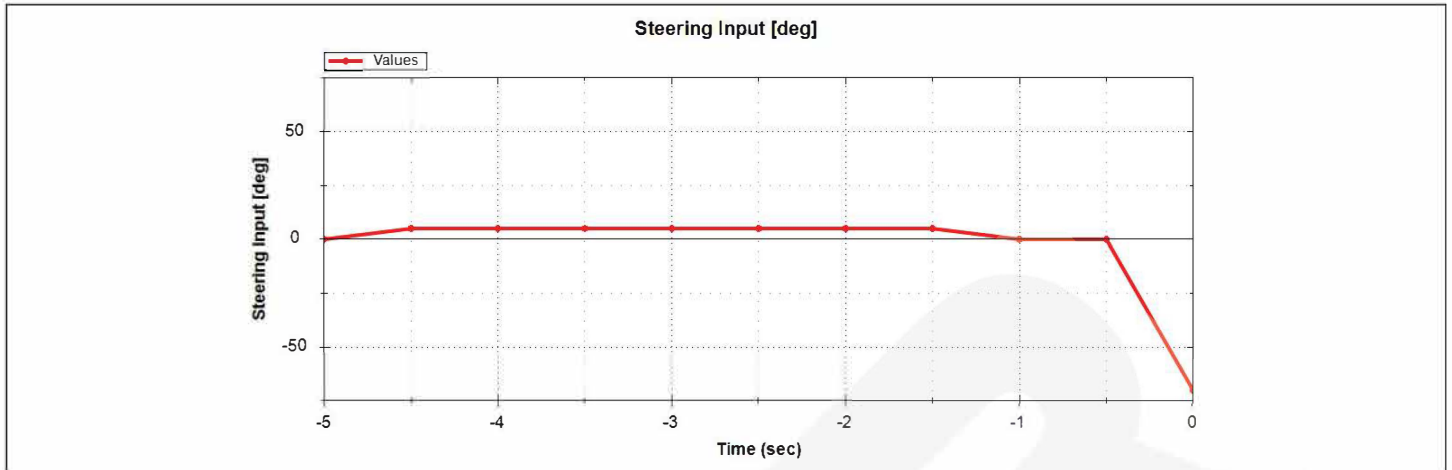
Anti-lock braking system activity

Time (sec)	Anti-lock braking system activity
-5.0	OFF
-4.5	OFF
-4.0	OFF
-3.5	OFF
-3.0	OFF
-2.5	OFF
-2.0	OFF
-1.5	OFF
-1.0	OFF
-0.5	OFF
0.0	ON

Stability Control

Time (sec)	Stability Control
-5.0	ON
-4.5	ON
-4.0	ON
-3.5	ON
-3.0	ON
-2.5	ON
-2.0	ON
-1.5	ON
-1.0	ON
-0.5	ON
0.0	ON

< Event 1 > Steering Input



Time (sec)	Steering Input [deg]
-5.0	0
-4.5	5
-4.0	5
-3.5	5
-3.0	5
-2.5	5
-2.0	5
-1.5	5
-1.0	0
-0.5	0
0.0	-70

Note) Positive value(CCW), Negative value(CW)

< Event 1 >

System Status at Event

Air bag warning lamp [on/off]	OFF
Safety belt status, driver	ON
Safety belt status, front passenger	OFF
Seat track position switch, foremost, status, driver	Not Supported
Seat track position switch, foremost, status, front passenger	Not Supported
Occupant size classification, driver (5% female or larger)	Not Supported
Occupant size classification, front passenger (child)	YES

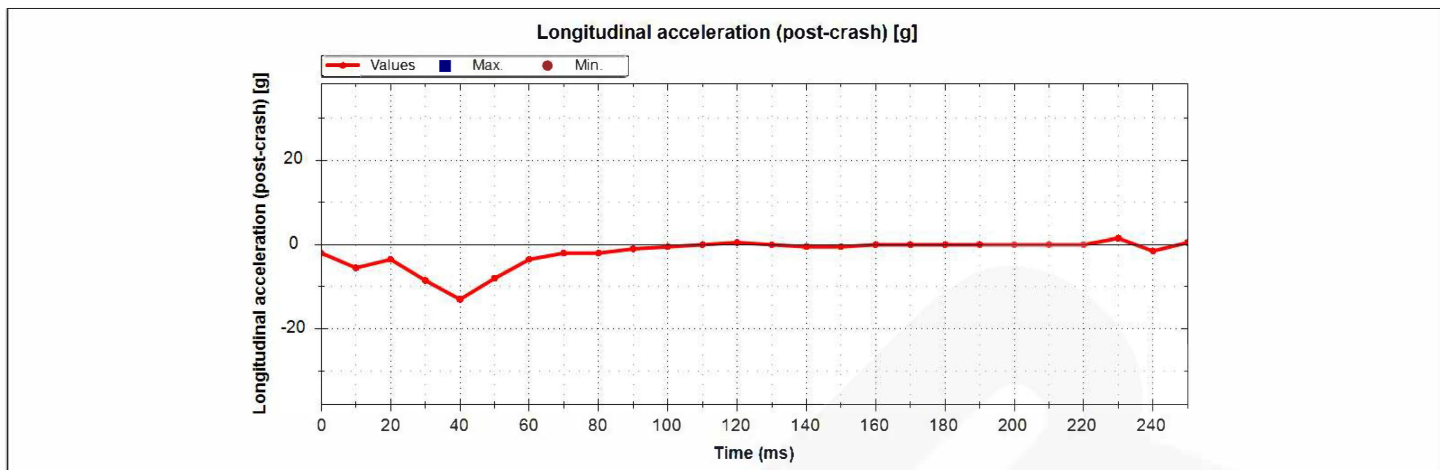
Deployment Command Data at Event

Frontal air bag deployment, time to single or 1st stage, driver [ms]	No deployment
Frontal air bag deployment, time to single or 1st stage, front passenger [ms]	No deployment
Frontal air bag deployment, time to 2nd stage, driver [ms]	No deployment
Frontal air bag deployment, time to 2nd stage, front passenger [ms]	No deployment
Frontal air bag deployment, time to 3rd stage, driver [ms]	Not supported
Frontal air bag deployment, time to 3rd stage, front passenger [ms]	Not supported
Frontal air bag deployment, time to 4th stage, front passenger [ms]	Not supported
Frontal air bag deployment, 2nd stage disposal, driver, Y/N	NO
Frontal air bag deployment, 2nd stage disposal, front passenger, Y/N	NO
Frontal air bag deployment, 3rd stage disposal, driver, Y/N	NO
Frontal air bag deployment, 3rd stage disposal, front passenger, Y/N	NO
Frontal air bag deployment, 4th stage disposal, front passenger, Y/N	NO
Knee air bag deployment, time to deploy, driver [ms]	Not supported
Knee air bag deployment, time to deploy, front passenger [ms]	Not supported
Side air bag deployment, time to deploy, driver [ms]	23
Side air bag deployment, time to deploy, front passenger [ms]	No deployment
Side air bag deployment, time to deploy, driver side, rear [ms]	Not supported
Side air bag deployment, time to deploy, passenger side, rear [ms]	Not supported
Side curtain air bag deployment, time to deploy, driver side [ms]	23
Side curtain air bag deployment, time to deploy, passenger side [ms]	No deployment
Side curtain air bag deployment, time to deploy, driver side, rear [ms]	Not supported
Side curtain air bag deployment, time to deploy, passenger side, rear [ms]	Not supported
Pretensioner deployment, time to fire, driver [ms]	23
Pretensioner deployment, time to fire, front passenger [ms]	23
Pretensioner deployment, time to fire, driver side, rear [ms]	Not supported

Pretensioner deployment, time to fire, passenger side, rear [ms]	Not supported
Anchor pretensioner deployment time to fire, driver [ms]	Not supported
Anchor pretensioner deployment time to fire, front passenger [ms]	Not supported
Adaptive load limiter deployment, time to fire, driver [ms]	Not supported
Adaptive load limiter deployment, time to fire, front passenger [ms]	Not supported
Far-side impact center air bag deployment time to deploy, front [ms]	Not supported

< Event 1 >

Longitudinal crash pulse_acceleration (g, 0 ~ 250msec)

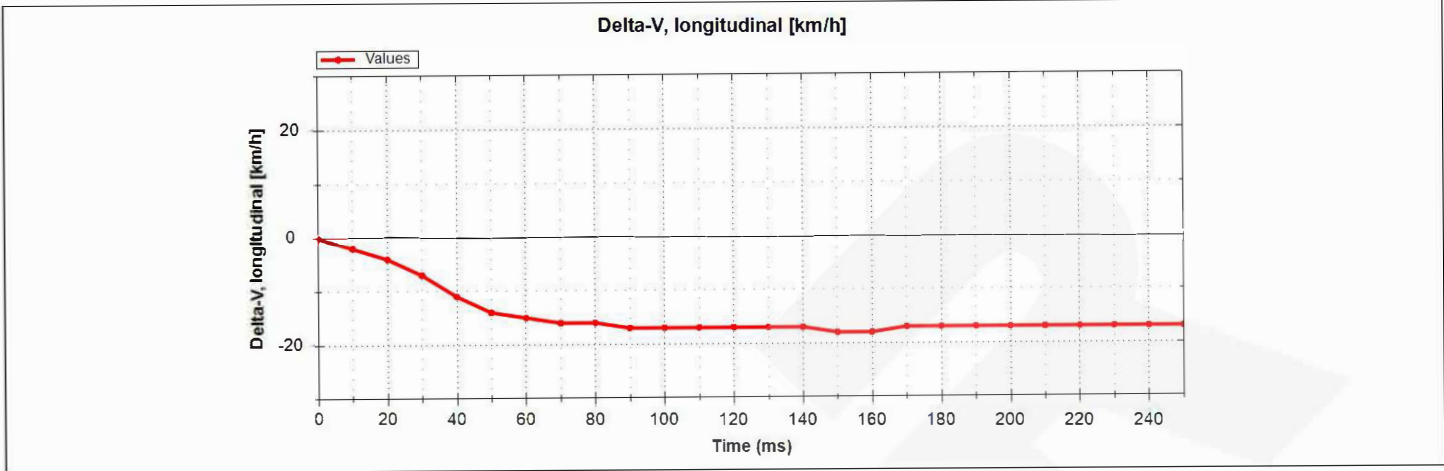


Time (ms)	Longitudinal acceleration (post-crash) [g]
0.0	-2.0
10.0	-5.5
20.0	-3.5
30.0	-8.5
40.0	-13.0
50.0	-8.0
60.0	-3.5
70.0	-2.0
80.0	-2.0
90.0	-1.0
100.0	-0.5
110.0	0.0
120.0	0.5
130.0	0.0
140.0	-0.5
150.0	-0.5
160.0	0.0
170.0	0.0
180.0	0.0
190.0	0.0
200.0	0.0
210.0	0.0
220.0	0.0
230.0	1.5
240.0	-1.5
250.0	0.5

< Event 1 >

Longitudinal crash pulse_delta-v (kph, 0 ~ 250msec)

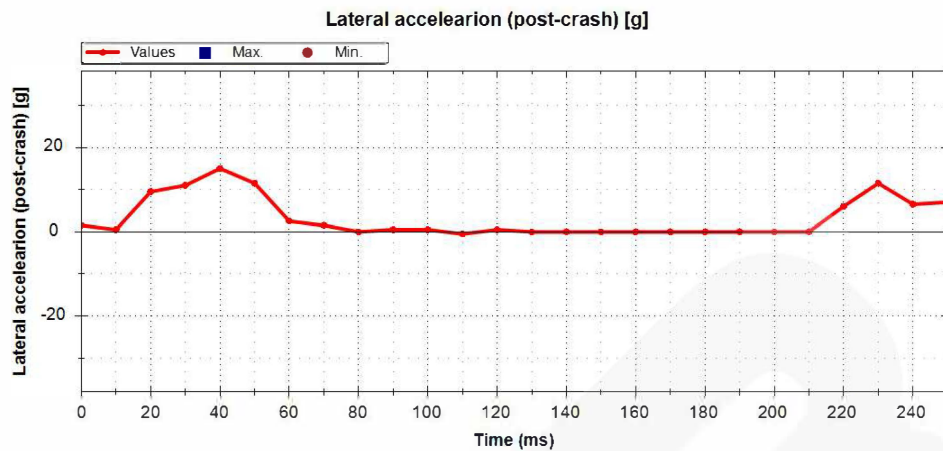
Maximum Delta-V, longitudinal [km/h]	-18
Time, maximum Delta-V, longitudinal [ms]	157.5



Time (ms)	Delta-V, longitudinal [km/h]
0.0	0
10.0	-2
20.0	-4
30.0	-7
40.0	-11
50.0	-14
60.0	-15
70.0	-16
80.0	-16
90.0	-17
100.0	-17
110.0	-17
120.0	-17
130.0	-17
140.0	-17
150.0	-18
160.0	-18
170.0	-17
180.0	-17
190.0	-17
200.0	-17
210.0	-17
220.0	-17
230.0	-17
240.0	-17
250.0	-17

< Event 1 >

Lateral crash pulse_acceleration (g, 0 ~ 250msec)

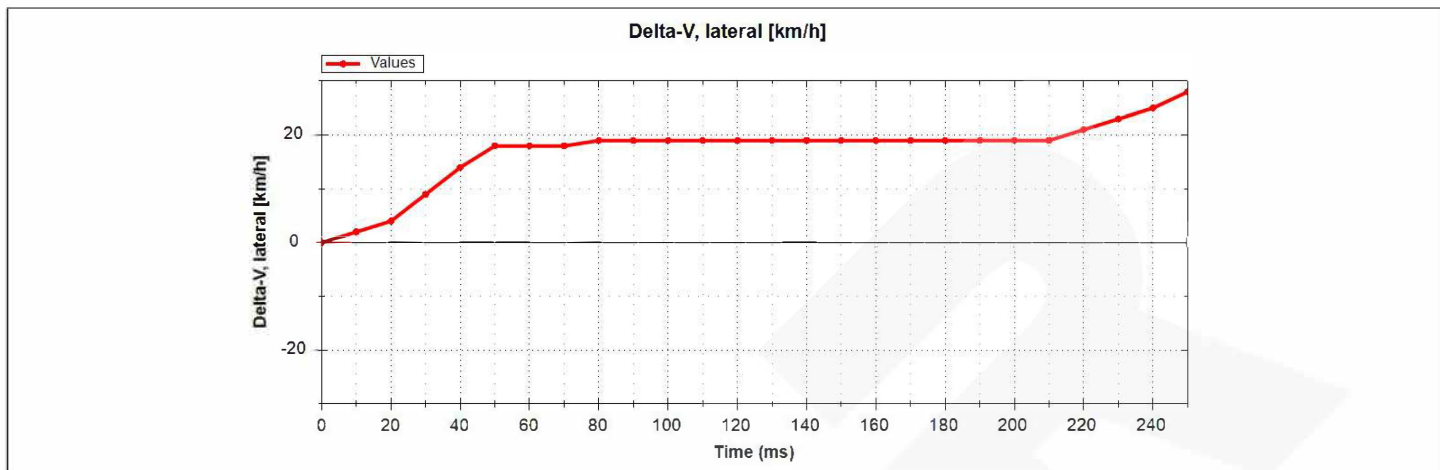


Time (ms)	Lateral acceleration (post-crash) [g]
0.0	1.5
10.0	0.5
20.0	9.5
30.0	11.0
40.0	15.0
50.0	11.5
60.0	2.5
70.0	1.5
80.0	0.0
90.0	0.5
100.0	0.5
110.0	-0.5
120.0	0.5
130.0	0.0
140.0	0.0
150.0	0.0
160.0	0.0
170.0	0.0
180.0	0.0
190.0	0.0
200.0	0.0
210.0	0.0
220.0	6.0
230.0	11.5
240.0	6.5
250.0	7.0

< Event 1 >

Lateral crash pulse_delta-v (kph, 0 ~ 250msec)

Maximum Delta-V, lateral [km/h]	30
Time, maximum Delta-V, lateral [ms]	267.5



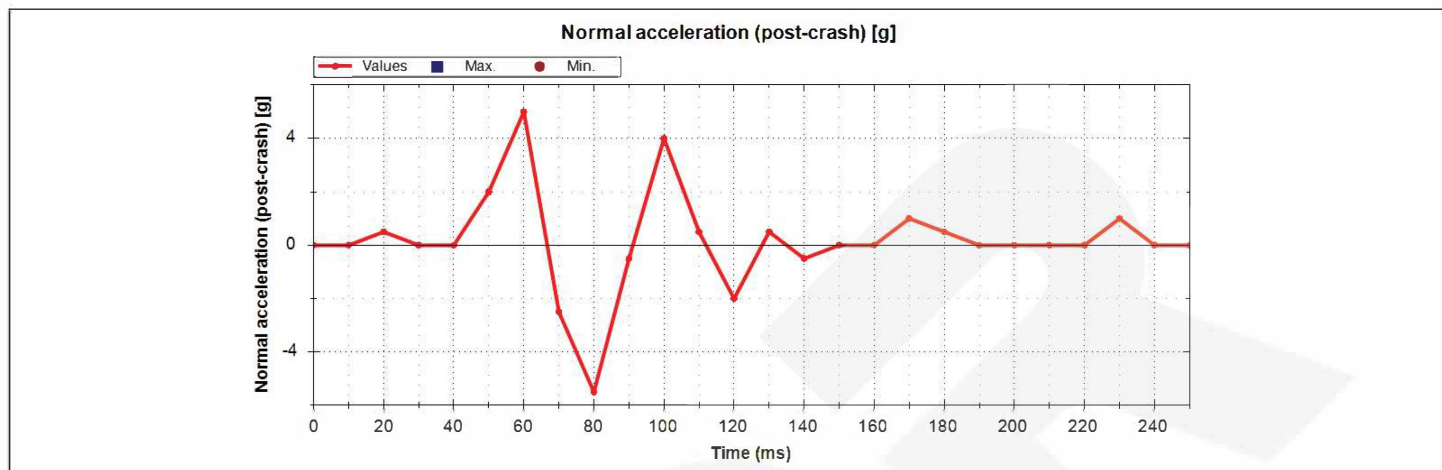
Time (ms)	Delta-V, lateral [km/h]
0.0	0
10.0	2
20.0	4
30.0	9
40.0	14
50.0	18
60.0	18
70.0	18
80.0	19
90.0	19
100.0	19
110.0	19
120.0	19
130.0	19
140.0	19
150.0	19
160.0	19
170.0	19
180.0	19
190.0	19
200.0	19
210.0	19
220.0	21
230.0	23
240.0	25
250.0	28

< Event 1 >

Crash pulse Resultant, Time_Max. delta-V resultant (0 ~ 300 msec)

Time, maximum Delta-V, resultant [ms]	267.5
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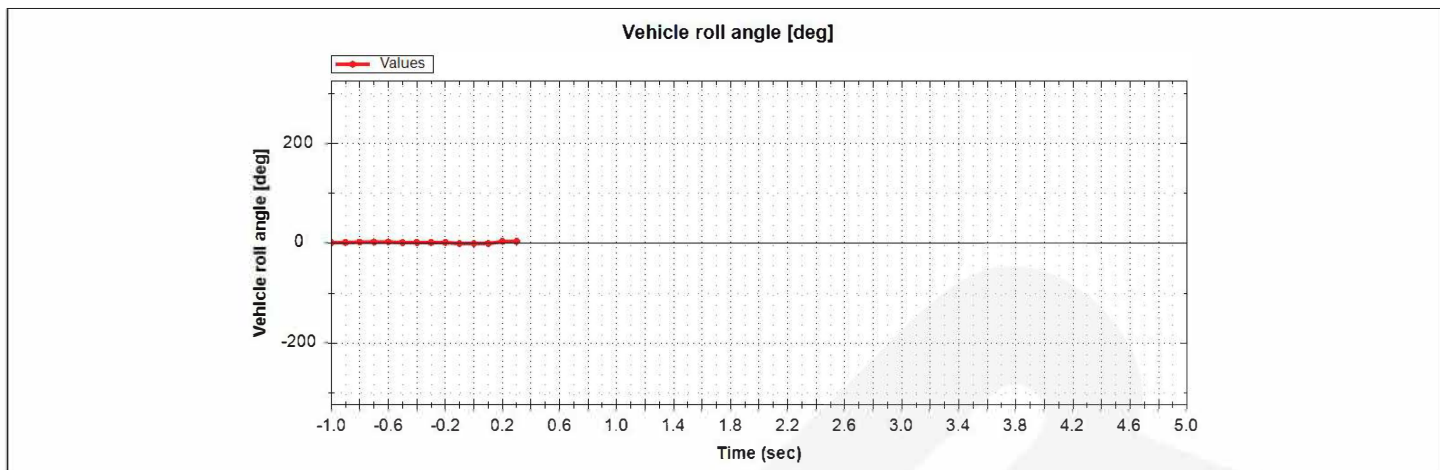
Normal acceleration (g, 1 ~ 5sec)



Time (ms)	Normal acceleration (post-crash) [g]
0.0	0.0
10.0	0.0
20.0	0.5
30.0	0.0
40.0	0.0
50.0	2.0
60.0	5.0
70.0	-2.5
80.0	-5.5
90.0	-0.5
100.0	4.0
110.0	0.5
120.0	-2.0
130.0	0.5
140.0	-0.5
150.0	0.0
160.0	0.0
170.0	1.0
180.0	0.5
190.0	0.0
200.0	0.0
210.0	0.0
220.0	0.0
230.0	1.0
240.0	0.0
250.0	0.0

< Event 1 >

Roll angle (degree, -1 ~ 5sec)

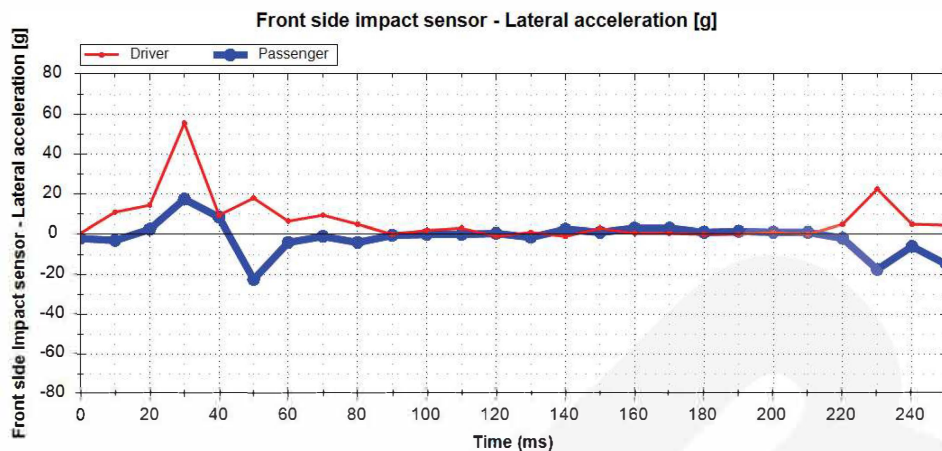


Time (sec)	Vehicle roll angle [deg]
-1.0	2
-0.9	2
-0.8	3
-0.7	3
-0.6	3
-0.5	2
-0.4	2
-0.3	2
-0.2	2
-0.1	0
0.0	0
0.1	0
0.2	4
0.3	4
0.4	Invalid data
0.5	Invalid data
0.6	Invalid data
0.7	Invalid data
0.8	Invalid data
0.9	Invalid data
1.0	Invalid data
1.1	Invalid data
1.2	Invalid data
1.3	Invalid data
1.4	Invalid data
1.5	Invalid data
1.6	Invalid data
1.7	Invalid data
1.8	Invalid data
1.9	Invalid data
2.0	Invalid data

2.1	Invalid data
2.2	Invalid data
2.3	Invalid data
2.4	Invalid data
2.5	Invalid data
2.6	Invalid data
2.7	Invalid data
2.8	Invalid data
2.9	Invalid data
3.0	Invalid data
3.1	Invalid data
3.2	Invalid data
3.3	Invalid data
3.4	Invalid data
3.5	Invalid data
3.6	Invalid data
3.7	Invalid data
3.8	Invalid data
3.9	Invalid data
4.0	Invalid data
4.1	Invalid data
4.2	Invalid data
4.3	Invalid data
4.4	Invalid data
4.5	Invalid data
4.6	Invalid data
4.7	Invalid data
4.8	Invalid data
4.9	Invalid data
5.0	Invalid data

< Event 1 >

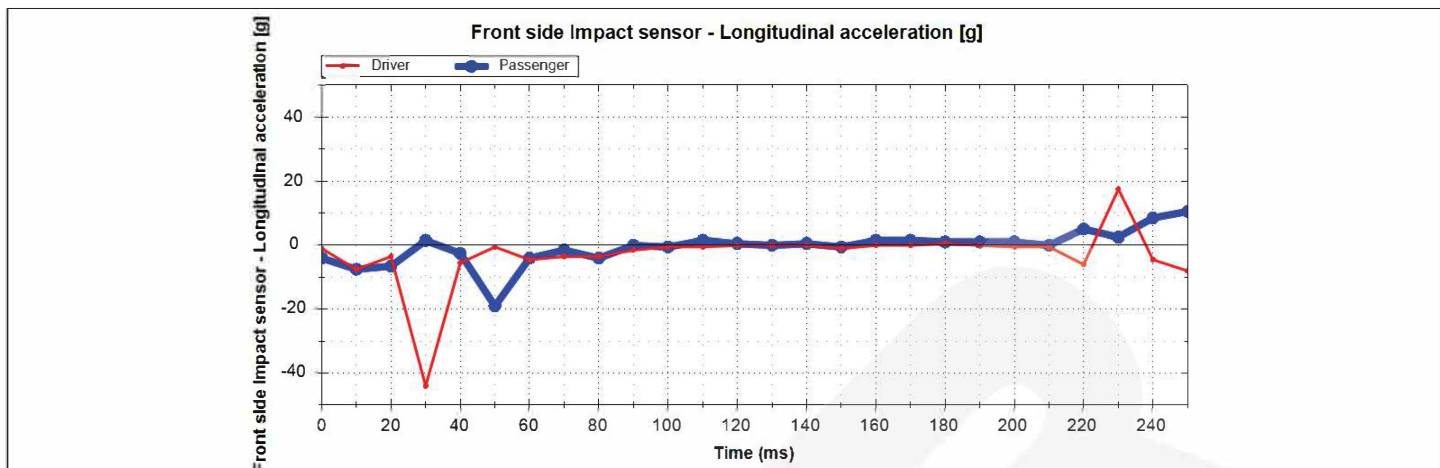
Front side impact sensor – Lateral acceleration (g, 0 ~ 250msec)



Time (ms)	Front driver side impact sensor - Lateral acceleration [g]	Front passenger side impact sensor - Lateral acceleration [g]
0.0	0.5	-2.0
10.0	11.0	-3.0
20.0	14.5	2.5
30.0	55.5	17.5
40.0	9.5	8.5
50.0	18.0	-22.5
60.0	6.5	-4.0
70.0	9.5	-1.0
80.0	5.0	-4.0
90.0	0.0	-0.5
100.0	2.0	0.0
110.0	3.0	0.0
120.0	-1.0	0.5
130.0	1.0	-1.5
140.0	-1.0	2.5
150.0	3.0	1.0
160.0	0.5	3.0
170.0	0.5	3.0
180.0	0.0	1.0
190.0	0.0	1.5
200.0	1.0	1.0
210.0	0.0	1.0
220.0	5.0	-2.0
230.0	22.5	-17.5
240.0	5.0	-6.0
250.0	4.5	-15.0

< Event 1 >

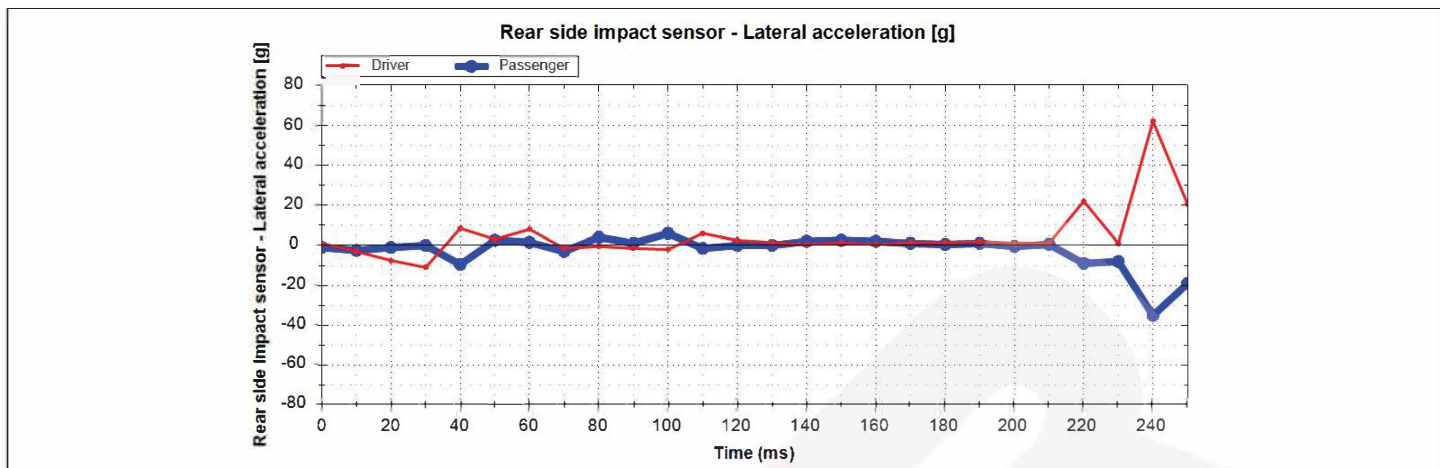
Front side Impact sensor – Longitudinal acceleration (g, 0 ~ 250msec)



Time (ms)	Front driver side Impact sensor - Longitudinal acceleration [g]	Front passenger side Impact sensor - Longitudinal acceleration [g]
0.0	-1.0	-4.0
10.0	-7.5	-7.5
20.0	-3.5	-6.5
30.0	-44.0	1.5
40.0	-5.5	-2.5
50.0	-0.5	-19.0
60.0	-4.5	-4.0
70.0	-3.5	-1.5
80.0	-3.5	-4.0
90.0	-1.5	0.0
100.0	-0.5	-0.5
110.0	-0.5	1.5
120.0	0.0	0.5
130.0	0.0	0.0
140.0	0.0	0.5
150.0	-1.0	-0.5
160.0	0.0	1.5
170.0	0.0	1.5
180.0	0.5	1.0
190.0	0.0	1.0
200.0	-0.5	1.0
210.0	-0.5	0.0
220.0	-6.0	5.0
230.0	17.5	2.5
240.0	-4.5	8.5
250.0	-8.0	10.5

< Event 1 >

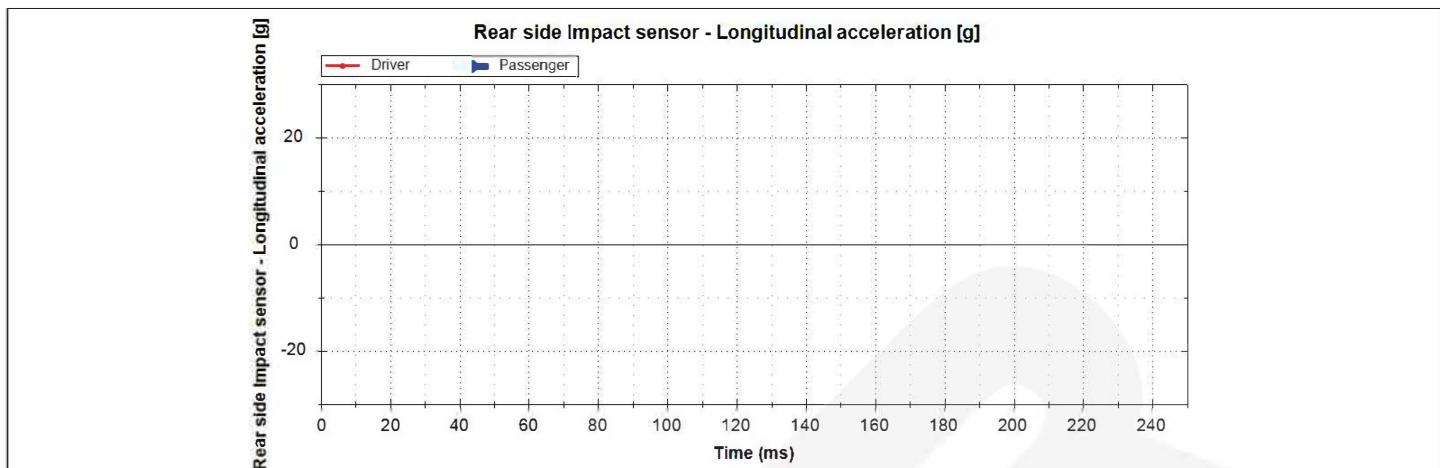
Rear side impact sensor – Lateral acceleration (g, 0 ~ 250msec)



Time (ms)	Rear driver side impact sensor - Lateral acceleration [g]	Rear passenger side impact sensor - Lateral acceleration [g]
0.0	1.0	-1.0
10.0	-3.0	-2.5
20.0	-7.5	-1.0
30.0	-11.0	0.0
40.0	8.5	-9.5
50.0	3.0	2.5
60.0	8.0	1.5
70.0	-1.5	-3.0
80.0	-0.5	4.0
90.0	-1.5	1.0
100.0	-2.0	6.0
110.0	6.0	-1.5
120.0	2.5	0.0
130.0	1.5	0.0
140.0	0.5	2.0
150.0	1.5	2.5
160.0	0.5	2.0
170.0	1.5	1.0
180.0	1.5	0.5
190.0	2.0	1.0
200.0	1.0	-0.5
210.0	1.0	0.5
220.0	22.0	-9.0
230.0	1.0	-8.0
240.0	62.0	-35.0
250.0	20.5	-19.0

< Event 1 >

Rear side Impact sensor – Longitudinal acceleration (g, 0 ~ 250msec)



Time (ms)	Rear driver side Impact sensor - Longitudinal acceleration [g]	Rear passenger side Impact sensor - Longitudinal acceleration [g]
0.0	Not supported	Not supported
10.0	Not supported	Not supported
20.0	Not supported	Not supported
30.0	Not supported	Not supported
40.0	Not supported	Not supported
50.0	Not supported	Not supported
60.0	Not supported	Not supported
70.0	Not supported	Not supported
80.0	Not supported	Not supported
90.0	Not supported	Not supported
100.0	Not supported	Not supported
110.0	Not supported	Not supported
120.0	Not supported	Not supported
130.0	Not supported	Not supported
140.0	Not supported	Not supported
150.0	Not supported	Not supported
160.0	Not supported	Not supported
170.0	Not supported	Not supported
180.0	Not supported	Not supported
190.0	Not supported	Not supported
200.0	Not supported	Not supported
210.0	Not supported	Not supported
220.0	Not supported	Not supported
230.0	Not supported	Not supported
240.0	Not supported	Not supported
250.0	Not supported	Not supported

2023 (Stellantis) RAM 1500

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	3C6UR5CJ0PG*****
User	
Case Number	
EDR Data Imaging Date	
Crash Date	
Filename	VS.CDRX
Saved on	Thursday, January 11 2024 at 11:45:46
Imaged with CDR version	Crash Data Retrieval Tool 23.3
Imaged with Software Licensed to (Company Name)	NHTSA
Reported with CDR version	Crash Data Retrieval Tool 23.3
Reported with Software Licensed to (Company Name)	NHTSA
EDR Device Type	Airbag Control Module
Event(s) recovered	Most Recent Event (Non-Deployment 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 / 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 / Total Number of 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 / Operation via Energy Reserve - "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 / Supply Voltage at Event ACM (V) - 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 / 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, LR, 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.
- For the 2023-2024 MY Alfa Romeo Tonale and Dodge Hornet "255" will be displayed for a particular time to deploy whenever 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
 - +/- 299.48 deg/sec for the 2023-2024 MY Alfa Romeo Tonale and Dodge Hornet
 - +/- 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.
 - For the 2023-2024 MY Alfa Romeo Tonale and Dodge Hornet, "Braking System, Maximum Braking" indicates the status (active/not active) of the Hydraulic Brake Assist (HBA).
- 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.
 - For the 2023-2024 MY Alfa Romeo Tonale and Dodge Hornet, "Fail Present" is set if the CC-related steering wheel commands "Speed Rocker", "Resume" and "Resume/Cancel" fail the plausibility check; otherwise, the signal is set to "Fail Not Present"
 - Cruise Control Engaged Status/Active / Cruise Control Engaged - "Engaged"/ "Yes"/ "Active" indicates the Cruise Control system is actively controlling vehicle speed. "Not Engaged"/ "No" / "Not Active" 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 / Adaptive Cruise Control System 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.
 - For the 2023-2024 MY Alfa Romeo Tonale and Dodge Hornet, "Off" indicates that system has been disabled by the user; "Enabled" indicates that the system has been enabled by the user, but is not engaged; "Engaged" indicates that the system is actively controlling and regulating the cruise speed; "Engaged Brake Only" indicates that the system is actively controlling only the braking portion; "Override" indicates that the system engagement is suspended to allow the driver manual takeover; "Cancel" indicates that the system has been disengaged by the driver or due to other reasons.
 - Set Speed / Adaptive Cruise Control Set Speed (if equip.) - This indicates the desired speed in mph that was input by the driver for the cruise control system.
 - ACC Faulted / Adaptive Cruise Control System Fail Status - "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.
 - For the 2023-2024 MY Alfa Romeo Tonale and Dodge Hornet stability control will not be displayed.
 - 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.
 - For the 2023-2024 MY Alfa Romeo Tonale and Dodge Hornet, "On-braking" indicates that the system is engaged and ready to brake autonomously without providing a collision warning before braking occurs.
 - 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 and the 2023-2024 MY Alfa Romeo Tonale and Dodge Hornet, this indicates the current transmission gear.
 - For the RAM ProMaster City and the 2023-2024 MY Alfa Romeo Tonale and Dodge Hornet, this indicates the status of the gear shift lever.
- Gear Status - This indicates what gear the Gearbox (TCM) has currently engaged.
- 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.
- OCM (Occupant Classification Module) status - , This indicates the occupant size classification, outboard front passenger for the 2023-2024 MY Alfa Romeo Tonale and Dodge Hornet. "EMPTY_RFIS" will indicate either a rear facing infant seat or an empty seat; "OC_5TH_UP" indicates anything weighing the same as or more than a 5th percentile female adult crash dummy; "OC_UNDETERMINED" indicates undetermined;
- OCM (Occupant Classification Module) Fault Status - This indicates if there is a fault in the OCM
- 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.
 - For the 2023-2024 MY Alfa Romeo Tonale and Dodge Hornet, for the versions with ETC (Electric Throttle Control) "Flash for service" indicates that service is necessary on the ETC module or the ECM (Engine Control Module); while for the versions without ETC service is necessary on the diesel or gasoline ECM system
- Pre-Crash Recorder Complete / Pre-Crash Recorder Status - 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" / "Active" 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.
- Alfa Romeo Tonale is only CDR supported in the United States, Canada, Mexico and Saudi Arabia markets.
- Dodge Hornet is only CDR supported in the United States and Canada markets.
- Fiat 500/500e is only CDR supported in the United States, Canada, Mexico, and Brazil markets.

03002_Chrysler_r048

System Status at Retrieval

Original Vehicle Identification Number	3C6UR5CJ0PG*****
Ignition Cycle, Download	2,576
Airbag Control Module Part number	68428503AA
ACM Serial Number	T52MD052301377
Airbag Control Module Supplier	Bosch
ACM Supply Voltage at Time of Retrieval (Volts)	11.6

System Configuration at Retrieval

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

System Configuration at Event (Most Recent Event - Non-Deployment Event)

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

System Status at Event (Most Recent Event - Non-Deployment Event)

Event Number	1
Multi-Event, Number of Events	1
Total Number of Events	1
Time From Event 1 to 2 (sec)	>5
Complete File Recorded	Yes
Maximum Delta-V, Longitudinal (MPH [km/h])	-13.7 [-22]
Time, Maximum Delta-V, Longitudinal (ms)	94
Maximum Delta-V, Lateral (MPH [km/h])	2.5 [4]
Time, Maximum Delta-V, Lateral (ms)	88
Ignition Cycle, Crash	2,556
Safety Belt Status, Driver	Buckled
Safety Belt Status, Outboard Front Passenger	Not Buckled
Seat Track Position Switch, Foremost, Status, Outboard Front Passenger	Not in Frontal Zone
Operation System Time (sec)	2,067,274
Airbag Warning Lamp, On/Off	Off
Airbag Warning Lamp On Time Before Event (min)	0
Supply Voltage at Event, ACM (V)	14.5
Operation via Energy Reserve	No
VIN at event, Last 8 Digits	PG*****
Odometer at Event (miles [km])	19414.9 [31,245.3]

Deployment Command Data (Most Recent Event - Non-Deployment Event)

Frontal Airbag Deployment, 1st Stage, Driver	No
Frontal Airbag Deployment, Time to Deploy 1st Stage, Driver (ms)	N/A
Frontal Airbag Deployment, 2nd Stage, Driver	No
Frontal Airbag Deployment, Time to Deploy 2nd Stage, Driver (ms)	N/A
Frontal Airbag Deployment, 1st Stage, Outboard Front Passenger	No
Frontal Airbag, Time to Deploy 1st Stage, Outboard Front Passenger (ms)	N/A
Frontal Airbag Deployment, 2nd Stage, Outboard Front Passenger	No
Frontal Airbag Deployment, Time to Deploy 2nd Stage, Outboard Front Passenger (ms)	N/A
Frontal Airbag Deployment, 3rd Squib, Outboard Front Passenger	No
Frontal Airbag, Time to Deploy 3rd Squib, Outboard Front Passenger (ms)	N/A
Retractor Pretensioner Deployment, Driver	No
Anchor Pretensioner Deployment, Driver	No
Retractor Pretensioner Deployment, Outboard Front Passenger	No
Anchor Pretensioner Deployment, Outboard Front Passenger	No
Adaptive Load Limiter Deployment, Outboard Front Passenger	No
Side Curtain Airbag Deployment, Left	No
Side Seat Airbag Deployment, Front Left	No
Side Curtain Airbag Deployment, Right	No
Side Seat Airbag Deployment, Front Right	No

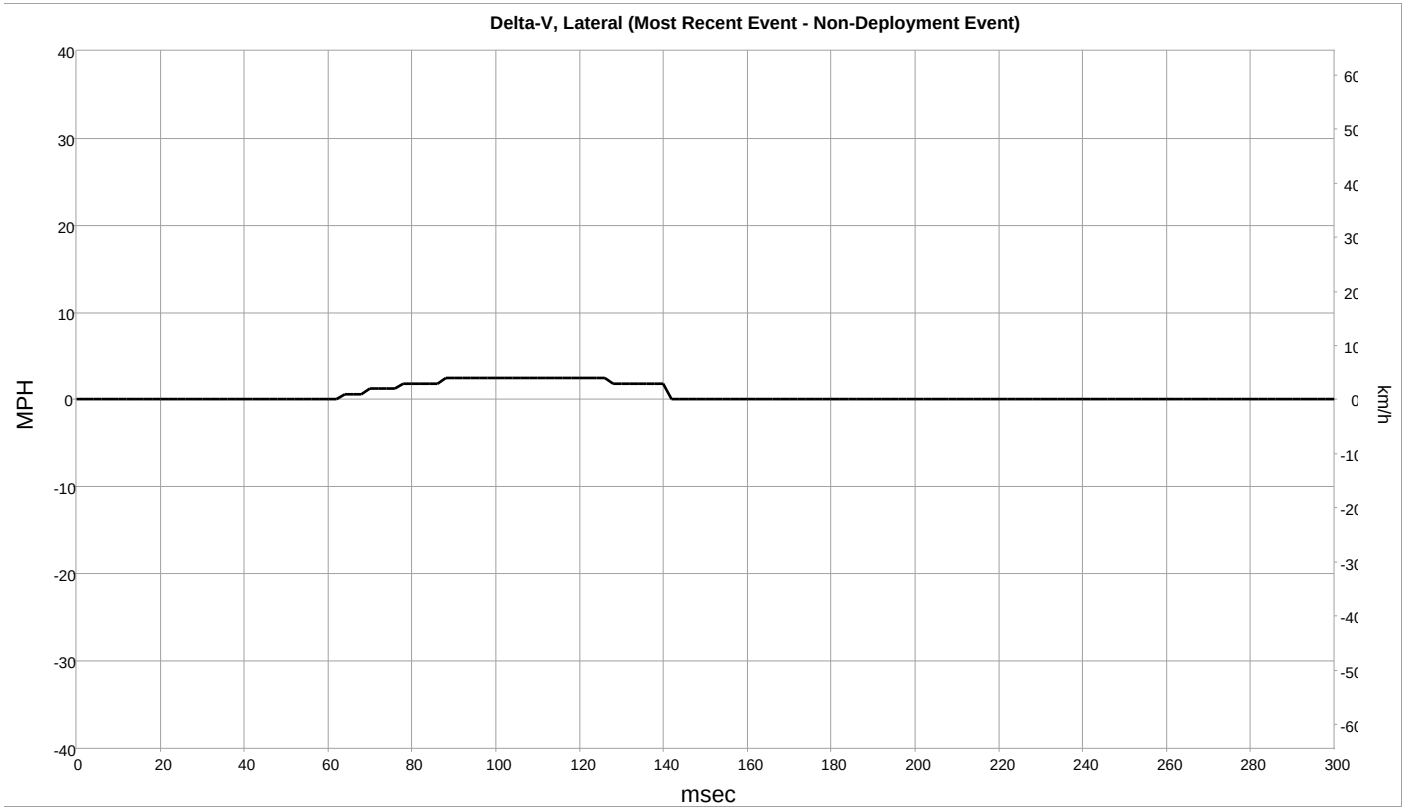
DTCs Present at Start of Event (Most Recent Event - Non-Deployment Event)

DTCs not Present.



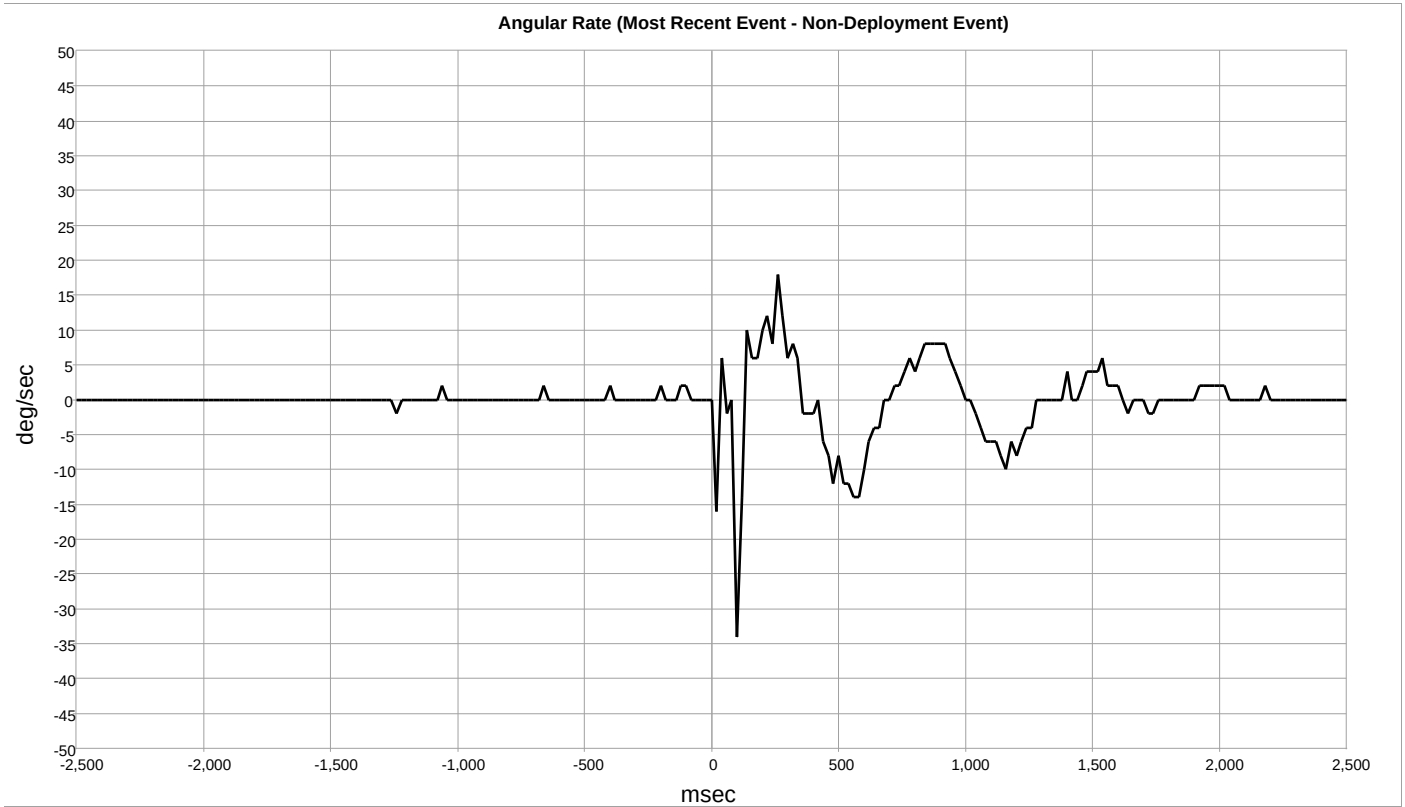
Longitudinal Crash Pulse (Most Recent Event - Non-Deployment Event)

Time (msec)	Delta-V, Longitudinal (MPH [km/h])	Time (msec)	Delta-V, Longitudinal (MPH [km/h])	Time (msec)	Delta-V, Longitudinal (MPH [km/h])
0	0.0 [0]	100	-13.7 [-22]	200	0.0 [0]
2	0.0 [0]	102	-13.7 [-22]	202	0.0 [0]
4	0.0 [0]	104	-13.7 [-22]	204	0.0 [0]
6	0.0 [0]	106	-13.7 [-22]	206	0.0 [0]
8	0.0 [0]	108	-13.7 [-22]	208	0.0 [0]
10	0.0 [0]	110	-13.7 [-22]	210	0.0 [0]
12	-0.6 [-1]	112	-13.7 [-22]	212	0.0 [0]
14	-0.6 [-1]	114	-13.7 [-22]	214	0.0 [0]
16	-0.6 [-1]	116	-13.7 [-22]	216	0.0 [0]
18	-1.2 [-2]	118	-13.7 [-22]	218	0.0 [0]
20	-1.2 [-2]	120	-13.7 [-22]	220	0.0 [0]
22	-1.2 [-2]	122	-13.7 [-22]	222	0.0 [0]
24	-1.9 [-3]	124	-13.7 [-22]	224	0.0 [0]
26	-1.9 [-3]	126	-13.7 [-22]	226	0.0 [0]
28	-2.5 [-4]	128	-13.7 [-22]	228	0.0 [0]
30	-2.5 [-4]	130	-13.7 [-22]	230	0.0 [0]
32	-3.1 [-5]	132	-13.7 [-22]	232	0.0 [0]
34	-3.1 [-5]	134	-13.7 [-22]	234	0.0 [0]
36	-3.7 [-6]	136	-13.7 [-22]	236	0.0 [0]
38	-4.3 [-7]	138	-13.7 [-22]	238	0.0 [0]
40	-4.3 [-7]	140	-13.7 [-22]	240	0.0 [0]
42	-5.0 [-8]	142	0.0 [0]	242	0.0 [0]
44	-5.6 [-9]	144	0.0 [0]	244	0.0 [0]
46	-6.2 [-10]	146	0.0 [0]	246	0.0 [0]
48	-6.2 [-10]	148	0.0 [0]	248	0.0 [0]
50	-6.2 [-10]	150	0.0 [0]	250	0.0 [0]
52	-6.8 [-11]	152	0.0 [0]	252	0.0 [0]
54	-7.5 [-12]	154	0.0 [0]	254	0.0 [0]
56	-7.5 [-12]	156	0.0 [0]	256	0.0 [0]
58	-8.1 [-13]	158	0.0 [0]	258	0.0 [0]
60	-8.7 [-14]	160	0.0 [0]	260	0.0 [0]
62	-8.7 [-14]	162	0.0 [0]	262	0.0 [0]
64	-9.3 [-15]	164	0.0 [0]	264	0.0 [0]
66	-9.9 [-16]	166	0.0 [0]	266	0.0 [0]
68	-9.9 [-16]	168	0.0 [0]	268	0.0 [0]
70	-10.6 [-17]	170	0.0 [0]	270	0.0 [0]
72	-10.6 [-17]	172	0.0 [0]	272	0.0 [0]
74	-11.2 [-18]	174	0.0 [0]	274	0.0 [0]
76	-11.8 [-19]	176	0.0 [0]	276	0.0 [0]
78	-11.8 [-19]	178	0.0 [0]	278	0.0 [0]
80	-12.4 [-20]	180	0.0 [0]	280	0.0 [0]
82	-12.4 [-20]	182	0.0 [0]	282	0.0 [0]
84	-13.0 [-21]	184	0.0 [0]	284	0.0 [0]
86	-13.0 [-21]	186	0.0 [0]	286	0.0 [0]
88	-13.0 [-21]	188	0.0 [0]	288	0.0 [0]
90	-13.0 [-21]	190	0.0 [0]	290	0.0 [0]
92	-13.0 [-21]	192	0.0 [0]	292	0.0 [0]
94	-13.7 [-22]	194	0.0 [0]	294	0.0 [0]
96	-13.7 [-22]	196	0.0 [0]	296	0.0 [0]
98	-13.7 [-22]	198	0.0 [0]	298	0.0 [0]
				300	0.0 [0]



Lateral Crash Pulse (Most Recent Event - Non-Deployment Event)

Time (msec)	Delta-V, Lateral (MPH [km/h])	Time (msec)	Delta-V, Lateral (MPH [km/h])	Time (msec)	Delta-V, Lateral (MPH [km/h])
0	0.0 [0]	100	2.5 [4]	200	0.0 [0]
2	0.0 [0]	102	2.5 [4]	202	0.0 [0]
4	0.0 [0]	104	2.5 [4]	204	0.0 [0]
6	0.0 [0]	106	2.5 [4]	206	0.0 [0]
8	0.0 [0]	108	2.5 [4]	208	0.0 [0]
10	0.0 [0]	110	2.5 [4]	210	0.0 [0]
12	0.0 [0]	112	2.5 [4]	212	0.0 [0]
14	0.0 [0]	114	2.5 [4]	214	0.0 [0]
16	0.0 [0]	116	2.5 [4]	216	0.0 [0]
18	0.0 [0]	118	2.5 [4]	218	0.0 [0]
20	0.0 [0]	120	2.5 [4]	220	0.0 [0]
22	0.0 [0]	122	2.5 [4]	222	0.0 [0]
24	0.0 [0]	124	2.5 [4]	224	0.0 [0]
26	0.0 [0]	126	2.5 [4]	226	0.0 [0]
28	0.0 [0]	128	1.9 [3]	228	0.0 [0]
30	0.0 [0]	130	1.9 [3]	230	0.0 [0]
32	0.0 [0]	132	1.9 [3]	232	0.0 [0]
34	0.0 [0]	134	1.9 [3]	234	0.0 [0]
36	0.0 [0]	136	1.9 [3]	236	0.0 [0]
38	0.0 [0]	138	1.9 [3]	238	0.0 [0]
40	0.0 [0]	140	1.9 [3]	240	0.0 [0]
42	0.0 [0]	142	0.0 [0]	242	0.0 [0]
44	0.0 [0]	144	0.0 [0]	244	0.0 [0]
46	0.0 [0]	146	0.0 [0]	246	0.0 [0]
48	0.0 [0]	148	0.0 [0]	248	0.0 [0]
50	0.0 [0]	150	0.0 [0]	250	0.0 [0]
52	0.0 [0]	152	0.0 [0]	252	0.0 [0]
54	0.0 [0]	154	0.0 [0]	254	0.0 [0]
56	0.0 [0]	156	0.0 [0]	256	0.0 [0]
58	0.0 [0]	158	0.0 [0]	258	0.0 [0]
60	0.0 [0]	160	0.0 [0]	260	0.0 [0]
62	0.0 [0]	162	0.0 [0]	262	0.0 [0]
64	0.6 [1]	164	0.0 [0]	264	0.0 [0]
66	0.6 [1]	166	0.0 [0]	266	0.0 [0]
68	0.6 [1]	168	0.0 [0]	268	0.0 [0]
70	1.2 [2]	170	0.0 [0]	270	0.0 [0]
72	1.2 [2]	172	0.0 [0]	272	0.0 [0]
74	1.2 [2]	174	0.0 [0]	274	0.0 [0]
76	1.2 [2]	176	0.0 [0]	276	0.0 [0]
78	1.9 [3]	178	0.0 [0]	278	0.0 [0]
80	1.9 [3]	180	0.0 [0]	280	0.0 [0]
82	1.9 [3]	182	0.0 [0]	282	0.0 [0]
84	1.9 [3]	184	0.0 [0]	284	0.0 [0]
86	1.9 [3]	186	0.0 [0]	286	0.0 [0]
88	2.5 [4]	188	0.0 [0]	288	0.0 [0]
90	2.5 [4]	190	0.0 [0]	290	0.0 [0]
92	2.5 [4]	192	0.0 [0]	292	0.0 [0]
94	2.5 [4]	194	0.0 [0]	294	0.0 [0]
96	2.5 [4]	196	0.0 [0]	296	0.0 [0]
98	2.5 [4]	198	0.0 [0]	298	0.0 [0]
				300	0.0 [0]



Angular Rate (Most Recent Event - Non-Deployment Event)

Time (msec)	Angular Rate (deg/sec)
-2500	0
-2480	0
-2460	0
-2440	0
-2420	0
-2400	0
-2380	0
-2360	0
-2340	0
-2320	0
-2300	0
-2280	0
-2260	0
-2240	0
-2220	0
-2200	0
-2180	0
-2160	0
-2140	0
-2120	0
-2100	0
-2080	0
-2060	0
-2040	0
-2020	0
-2000	0
-1980	0
-1960	0
-1940	0
-1920	0
-1900	0
-1880	0
-1860	0
-1840	0
-1820	0
-1800	0
-1780	0
-1760	0
-1740	0
-1720	0
-1700	0
-1680	0
-1660	0
-1640	0
-1620	0
-1600	0
-1580	0
-1560	0
-1540	0
-1520	0

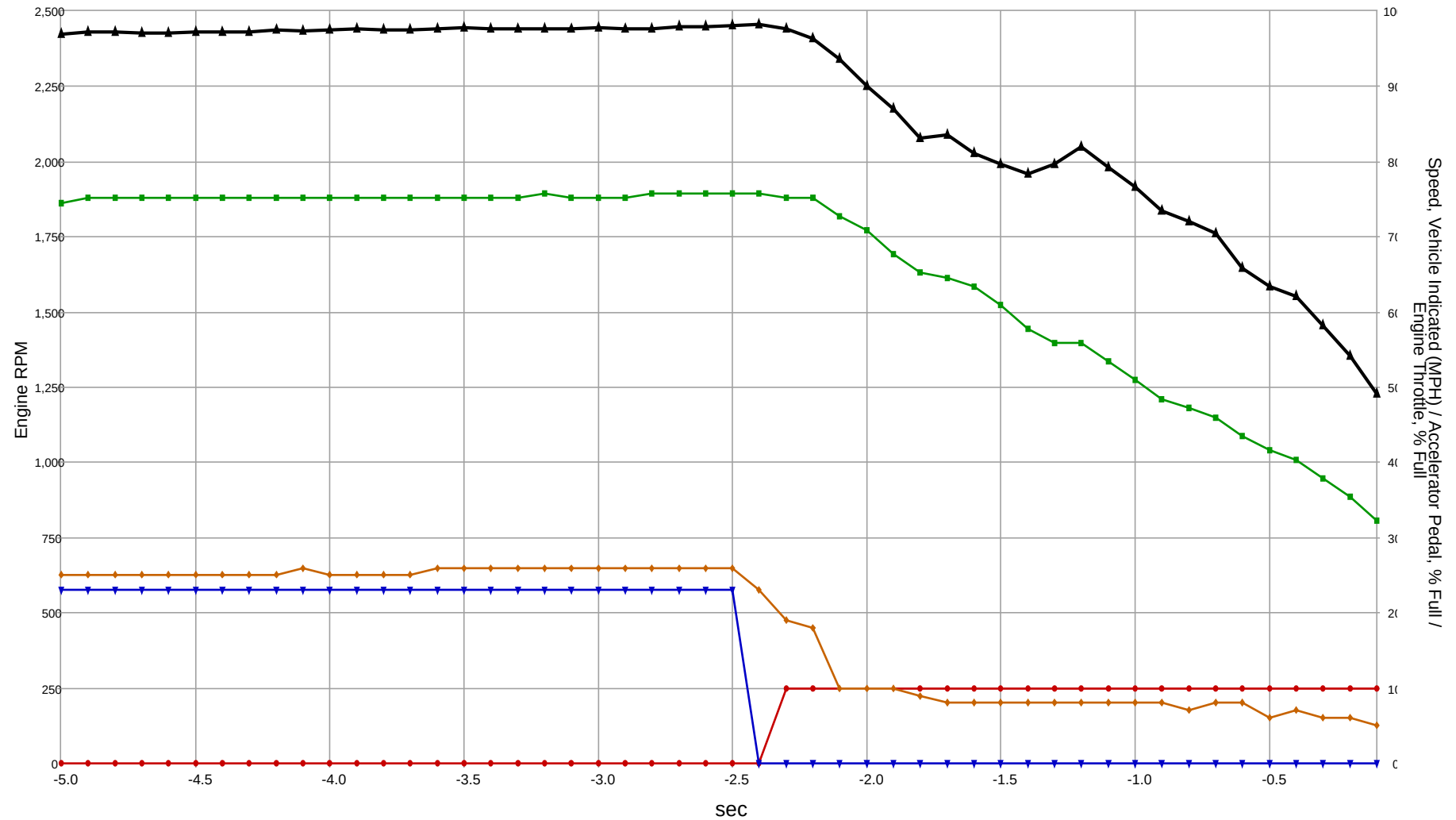
Time (msec)	Angular Rate (deg/sec)
-1500	0
-1480	0
-1460	0
-1440	0
-1420	0
-1400	0
-1380	0
-1360	0
-1340	0
-1320	0
-1300	0
-1280	0
-1260	0
-1240	-2
-1220	0
-1200	0
-1180	0
-1160	0
-1140	0
-1120	0
-1100	0
-1080	0
-1060	2
-1040	0
-1020	0
-1000	0
-980	0
-960	0
-940	0
-920	0
-900	0
-880	0
-860	0
-840	0
-820	0
-800	0
-780	0
-760	0
-740	0
-720	0
-700	0
-680	0
-660	2
-640	0
-620	0
-600	0
-580	0
-560	0
-540	0
-520	0

Time (msec)	Angular Rate (deg/sec)
-500	0
-480	0
-460	0
-440	0
-420	0
-400	2
-380	0
-360	0
-340	0
-320	0
-300	0
-280	0
-260	0
-240	0
-220	0
-200	2
-180	0
-160	0
-140	0
-120	2
-100	2
-80	0
-60	0
-40	0
-20	0
0	0
20	-16
40	6
60	-2
80	0
100	-34
120	-14
140	10
160	6
180	6
200	10
220	12
240	8
260	18
280	12
300	6
320	8
340	6
360	-2
380	-2
400	-2
420	0
440	-6
460	-8
480	-12

Angular Rate (Most Recent Event - Non-Deployment Event)

Time (msec)	Angular Rate (deg/sec)	Time (msec)	Angular Rate (deg/sec)
500	-8	1500	4
520	-12	1520	4
540	-12	1540	6
560	-14	1560	2
580	-14	1580	2
600	-10	1600	2
620	-6	1620	0
640	-4	1640	-2
660	-4	1660	0
680	0	1680	0
700	0	1700	0
720	2	1720	-2
740	2	1740	-2
760	4	1760	0
780	6	1780	0
800	4	1800	0
820	6	1820	0
840	8	1840	0
860	8	1860	0
880	8	1880	0
900	8	1900	0
920	8	1920	2
940	6	1940	2
960	4	1960	2
980	2	1980	2
1000	0	2000	2
1020	0	2020	2
1040	-2	2040	0
1060	-4	2060	0
1080	-6	2080	0
1100	-6	2100	0
1120	-6	2120	0
1140	-8	2140	0
1160	-10	2160	0
1180	-6	2180	2
1200	-8	2200	0
1220	-6	2220	0
1240	-4	2240	0
1260	-4	2260	0
1280	0	2280	0
1300	0	2300	0
1320	0	2320	0
1340	0	2340	0
1360	0	2360	0
1380	0	2380	0
1400	4	2400	0
1420	0	2420	0
1440	0	2440	0
1460	2	2460	0
1480	4	2480	0
		2500	0

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 (Most Recent Event - Non-Deployment Event) - Table 1 of 5

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	74.6 [120]	23	25	Off	2,426	No	On
-4.9	Complete	75.2 [121]	23	25	Off	2,432	No	On
-4.8	Complete	75.2 [121]	23	25	Off	2,431	No	On
-4.7	Complete	75.2 [121]	23	25	Off	2,427	No	On
-4.6	Complete	75.2 [121]	23	25	Off	2,427	No	On
-4.5	Complete	75.2 [121]	23	25	Off	2,433	No	On
-4.4	Complete	75.2 [121]	23	25	Off	2,433	No	On
-4.3	Complete	75.2 [121]	23	25	Off	2,432	No	On
-4.2	Complete	75.2 [121]	23	25	Off	2,437	No	On
-4.1	Complete	75.2 [121]	23	26	Off	2,436	No	On
-4.0	Complete	75.2 [121]	23	25	Off	2,439	No	On
-3.9	Complete	75.2 [121]	23	25	Off	2,441	No	On
-3.8	Complete	75.2 [121]	23	25	Off	2,438	No	On
-3.7	Complete	75.2 [121]	23	25	Off	2,439	No	On
-3.6	Complete	75.2 [121]	23	26	Off	2,443	No	On
-3.5	Complete	75.2 [121]	23	26	Off	2,447	No	On
-3.4	Complete	75.2 [121]	23	26	Off	2,441	No	On
-3.3	Complete	75.2 [121]	23	26	Off	2,443	No	On
-3.2	Complete	75.8 [122]	23	26	Off	2,441	No	On
-3.1	Complete	75.2 [121]	23	26	Off	2,444	No	On
-3.0	Complete	75.2 [121]	23	26	Off	2,447	No	On
-2.9	Complete	75.2 [121]	23	26	Off	2,444	No	On
-2.8	Complete	75.8 [122]	23	26	Off	2,443	No	On
-2.7	Complete	75.8 [122]	23	26	Off	2,449	No	On
-2.6	Complete	75.8 [122]	23	26	Off	2,450	No	On
-2.5	Complete	75.8 [122]	23	26	Off	2,453	No	On
-2.4	Complete	75.8 [122]	0	23	Off	2,455	No	On
-2.3	Complete	75.2 [121]	0	19	On	2,443	No	On
-2.2	Complete	75.2 [121]	0	18	On	2,410	No	On
-2.1	Complete	72.7 [117]	0	10	On	2,340	No	On
-2.0	Complete	70.8 [114]	0	10	On	2,253	Yes	On
-1.9	Complete	67.7 [109]	0	10	On	2,175	Yes	On
-1.8	Complete	65.2 [105]	0	9	On	2,078	Yes	On
-1.7	Complete	64.6 [104]	0	8	On	2,090	Yes	On
-1.6	Complete	63.4 [102]	0	8	On	2,028	Yes	On
-1.5	Complete	60.9 [98]	0	8	On	1,992	Yes	On
-1.4	Complete	57.8 [93]	0	8	On	1,958	Yes	On
-1.3	Complete	55.9 [90]	0	8	On	1,992	Yes	On
-1.2	Complete	55.9 [90]	0	8	On	2,048	Yes	On
-1.1	Complete	53.4 [86]	0	8	On	1,982	Yes	On
-1.0	Complete	51.0 [82]	0	8	On	1,918	Yes	On
-0.9	Complete	48.5 [78]	0	8	On	1,836	Yes	On
-0.8	Complete	47.2 [76]	0	7	On	1,800	Yes	On
-0.7	Complete	46.0 [74]	0	8	On	1,763	Yes	On
-0.6	Complete	43.5 [70]	0	8	On	1,646	Yes	On
-0.5	Complete	41.6 [67]	0	6	On	1,585	Yes	On
-0.4	Complete	40.4 [65]	0	7	On	1,551	Yes	On
-0.3	Complete	37.9 [61]	0	6	On	1,454	Yes	On
-0.2	Complete	35.4 [57]	0	6	On	1,354	Yes	On
-0.1	Complete	32.3 [52]	0	5	On	1,230	Yes	On

Pre-Crash Data -5 to 0 Sec (Most Recent Event - Non-Deployment Event) - Table 2 of 5

Time (sec)	Customer ESC Selection	ESC MIL	Steering Input (deg)	Yaw Rate (deg/sec)	PCM MIL	Raw Manifold Pressure (kPa)	Wheel Speed, LF (RPM)	Wheel Speed, RF (RPM)
-5.0	Enabled	Off	-0.5	0.16	Off	69.6	771	771
-4.9	Enabled	Off	-0.5	-0.08	Off	69.6	773	772
-4.8	Enabled	Off	-0.5	-0.56	Off	69.6	774	772
-4.7	Enabled	Off	-1.0	0.00	Off	70.4	771	773
-4.6	Enabled	Off	-1.0	-0.08	Off	70.4	775	772
-4.5	Enabled	Off	-1.0	-0.40	Off	70.4	774	774
-4.4	Enabled	Off	-1.0	-0.56	Off	70.4	774	774
-4.3	Enabled	Off	-1.5	0.00	Off	70.4	773	773
-4.2	Enabled	Off	-1.5	-0.16	Off	69.6	776	775
-4.1	Enabled	Off	-1.5	-0.72	Off	69.6	777	776
-4.0	Enabled	Off	-1.5	-0.08	Off	69.6	773	775
-3.9	Enabled	Off	-1.5	-0.08	Off	69.6	776	774
-3.8	Enabled	Off	-1.5	-0.56	Off	69.6	776	775
-3.7	Enabled	Off	-1.5	-0.16	Off	69.6	776	776
-3.6	Enabled	Off	-1.5	-0.08	Off	71.2	776	775
-3.5	Enabled	Off	-1.5	-0.24	Off	73.6	777	775
-3.4	Enabled	Off	-3.5	-0.48	Off	74.4	778	776
-3.3	Enabled	Off	-4.0	-0.32	Off	74.4	776	777
-3.2	Enabled	Off	-4.5	-0.56	Off	74.4	780	778
-3.1	Enabled	Off	-4.5	-0.80	Off	74.4	779	778
-3.0	Enabled	Off	-4.5	-0.48	Off	74.4	776	777
-2.9	Enabled	Off	-4.5	-0.64	Off	74.4	778	775
-2.8	Enabled	Off	-5.5	-0.80	Off	74.4	779	777
-2.7	Enabled	Off	-6.0	-0.56	Off	74.4	779	778
-2.6	Enabled	Off	-7.0	-0.64	Off	74.4	778	777
-2.5	Enabled	Off	-10.0	-1.04	Off	74.4	781	779
-2.4	Enabled	Off	-11.0	-1.52	Off	72.0	782	780
-2.3	Enabled	Off	-5.0	-1.28	Off	59.2	779	779
-2.2	Enabled	Off	-2.0	-0.56	Off	51.2	775	772
-2.1	Enabled	Off	-4.0	-0.08	Off	40.8	758	757
-2.0	Enabled	Off	-5.0	-0.08	Off	32.8	741	740
-1.9	Enabled	Off	-8.0	-0.56	Off	28.8	727	722
-1.8	Enabled	Off	-9.5	-1.52	Off	26.4	712	706
-1.7	Enabled	Off	-8.5	-1.92	Off	24.8	693	685
-1.6	Enabled	Off	-6.5	-2.16	Off	24.0	672	665
-1.5	Enabled	Off	-5.5	-2.16	Off	23.2	652	642
-1.4	Enabled	Off	-6.5	-2.24	Off	22.4	631	618
-1.3	Enabled	Off	-14.5	-3.12	Off	22.4	611	588
-1.2	Enabled	Off	-6.0	-3.76	Off	20.8	598	557
-1.1	Enabled	Off	1.0	-2.72	Off	21.6	574	537
-1.0	Enabled	Off	4.5	-2.32	Off	22.4	552	525
-0.9	Enabled	Off	7.5	-1.28	Off	22.4	528	521
-0.8	Enabled	Off	15.0	-0.64	Off	22.4	507	493
-0.7	Enabled	Off	16.5	1.28	Off	22.4	470	476
-0.6	Enabled	Off	14.0	2.32	Off	23.2	419	456
-0.5	Enabled	Off	23.0	2.80	Off	23.2	422	416
-0.4	Enabled	Off	17.0	3.36	Off	23.2	388	408
-0.3	Enabled	Off	13.0	2.48	Off	22.4	407	361
-0.2	Enabled	Off	16.5	3.12	Off	22.4	366	392
-0.1	Enabled	Off	13.5	3.36	Off	22.4	374	353

Pre-Crash Data -5 to 0 Sec (Most Recent Event - Non-Deployment Event) - Table 3 of 5

Time (sec)	Wheel Speed, LR (RPM)	Wheel Speed, RR (RPM)	ETC Lamp	ETC Flashing	PRNDL Status (if equip.)	Reverse Gear (manual only)	Tire Pressure Monitor Indicator Lamp	Tire Pressure Status, LF
-5.0	778	775	Off	No	D	No	On	Normal
-4.9	774	776	Off	No	D	No	On	Normal
-4.8	772	775	Off	No	D	No	On	Normal
-4.7	778	776	Off	No	D	No	On	Normal
-4.6	776	779	Off	No	D	No	On	Normal
-4.5	776	775	Off	No	D	No	On	Normal
-4.4	777	776	Off	No	D	No	On	Normal
-4.3	780	779	Off	No	D	No	On	Normal
-4.2	778	777	Off	No	D	No	On	Normal
-4.1	777	778	Off	No	D	No	On	Normal
-4.0	783	777	Off	No	D	No	On	Normal
-3.9	777	780	Off	No	D	No	On	Normal
-3.8	775	779	Off	No	D	No	On	Normal
-3.7	779	779	Off	No	D	No	On	Normal
-3.6	779	782	Off	No	D	No	On	Normal
-3.5	780	778	Off	No	D	No	On	Normal
-3.4	780	779	Off	No	D	No	On	Normal
-3.3	783	780	Off	No	D	No	On	Normal
-3.2	780	779	Off	No	D	No	On	Normal
-3.1	779	781	Off	No	D	No	On	Normal
-3.0	785	780	Off	No	D	No	On	Normal
-2.9	779	782	Off	No	D	No	On	Normal
-2.8	778	782	Off	No	D	No	On	Normal
-2.7	783	782	Off	No	D	No	On	Normal
-2.6	783	785	Off	No	D	No	On	Normal
-2.5	782	780	Off	No	D	No	On	Normal
-2.4	782	781	Off	No	D	No	On	Normal
-2.3	783	783	Off	No	D	No	On	Normal
-2.2	771	769	Off	No	D	No	On	Normal
-2.1	749	746	Off	No	D	No	On	Normal
-2.0	724	715	Off	No	D	No	On	Normal
-1.9	700	690	Off	No	D	No	On	Normal
-1.8	676	660	Off	No	D	No	On	Normal
-1.7	667	658	Off	No	D	No	On	Normal
-1.6	659	640	Off	No	D	No	On	Normal
-1.5	634	615	Off	No	D	No	On	Normal
-1.4	604	570	Off	No	D	No	On	Normal
-1.3	561	590	Off	No	D	No	On	Normal
-1.2	574	574	Off	No	D	No	On	Normal
-1.1	550	544	Off	No	D	No	On	Normal
-1.0	525	505	Off	No	D	No	On	Normal
-0.9	503	485	Off	No	D	No	On	Normal
-0.8	485	477	Off	No	D	No	On	Normal
-0.7	472	463	Off	No	D	No	On	Normal
-0.6	443	445	Off	No	D	No	On	Normal
-0.5	421	437	Off	No	D	No	On	Normal
-0.4	412	412	Off	No	D	No	On	Normal
-0.3	387	396	Off	No	D	No	On	Normal
-0.2	354	365	Off	No	D	No	On	Normal
-0.1	339	322	Off	No	D	No	On	Normal

Pre-Crash Data -5 to 0 Sec (Most Recent Event - Non-Deployment Event) - Table 4 of 5

Time (sec)	Tire Pressure Status, RF	Tire Pressure Status, RR	Tire Pressure Status, LR	Tire Pressure, LF (psi)	Tire Pressure, RF (psi)	Tire Pressure, RR (psi)	Tire Pressure, LR (psi)	Tire Pressure - Dually Right (psi)
-5.0	Normal	High	Normal	54	54	58	55	SNA
-4.9	Normal	High	Normal	54	54	58	55	SNA
-4.8	Normal	High	Normal	54	54	58	55	SNA
-4.7	Normal	High	Normal	54	54	58	55	SNA
-4.6	Normal	High	Normal	54	54	58	55	SNA
-4.5	Normal	High	Normal	54	54	58	55	SNA
-4.4	Normal	High	Normal	54	54	58	55	SNA
-4.3	Normal	High	Normal	54	54	59	55	SNA
-4.2	Normal	High	Normal	54	54	59	55	SNA
-4.1	Normal	High	Normal	54	54	59	55	SNA
-4.0	Normal	High	Normal	54	54	59	55	SNA
-3.9	Normal	High	Normal	54	54	59	55	SNA
-3.8	Normal	High	Normal	54	54	59	55	SNA
-3.7	Normal	High	Normal	54	54	59	55	SNA
-3.6	Normal	High	Normal	54	54	59	55	SNA
-3.5	Normal	High	Normal	54	54	59	55	SNA
-3.4	Normal	High	Normal	54	54	59	55	SNA
-3.3	Normal	High	Normal	54	54	59	55	SNA
-3.2	Normal	High	Normal	54	54	59	55	SNA
-3.1	Normal	High	Normal	54	54	59	55	SNA
-3.0	Normal	High	Normal	54	54	59	55	SNA
-2.9	Normal	High	Normal	54	54	59	55	SNA
-2.8	Normal	High	Normal	54	54	59	55	SNA
-2.7	Normal	High	Normal	54	54	59	55	SNA
-2.6	Normal	High	Normal	54	54	59	55	SNA
-2.5	Normal	High	Normal	54	54	59	55	SNA
-2.4	Normal	High	Normal	54	54	59	55	SNA
-2.3	Normal	High	Normal	54	54	59	55	SNA
-2.2	Normal	High	Normal	54	54	59	55	SNA
-2.1	Normal	High	Normal	54	54	59	55	SNA
-2.0	Normal	High	Normal	54	54	59	55	SNA
-1.9	Normal	High	Normal	54	54	59	55	SNA
-1.8	Normal	High	Normal	54	54	59	55	SNA
-1.7	Normal	High	Normal	54	54	59	55	SNA
-1.6	Normal	High	Normal	54	54	59	55	SNA
-1.5	Normal	High	Normal	54	54	59	55	SNA
-1.4	Normal	High	Normal	54	54	59	55	SNA
-1.3	Normal	High	Normal	54	54	59	55	SNA
-1.2	Normal	High	Normal	54	54	59	55	SNA
-1.1	Normal	High	Normal	54	54	59	55	SNA
-1.0	Normal	High	Normal	54	54	59	55	SNA
-0.9	Normal	High	Normal	54	54	59	55	SNA
-0.8	Normal	High	Normal	54	54	59	55	SNA
-0.7	Normal	High	Normal	54	54	59	55	SNA
-0.6	Normal	High	Normal	54	54	59	55	SNA
-0.5	Normal	High	Normal	54	54	59	55	SNA
-0.4	Normal	High	Normal	54	54	59	55	SNA
-0.3	Normal	High	Normal	54	54	59	55	SNA
-0.2	Normal	High	Normal	54	54	59	55	SNA
-0.1	Normal	High	Normal	54	54	59	55	SNA

Pre-Crash Data -5 to 0 Sec (Most Recent Event - Non-Deployment Event) - Table 5 of 5

Time (sec)	Tire Pressure - Dually Left (psi)	Cruise Control Engaged (if equipped)	Cruise Control Status (if equipped)
-5.0	SNA	Not engaged	Off
-4.9	SNA	Not engaged	Off
-4.8	SNA	Not engaged	Off
-4.7	SNA	Not engaged	Off
-4.6	SNA	Not engaged	Off
-4.5	SNA	Not engaged	Off
-4.4	SNA	Not engaged	Off
-4.3	SNA	Not engaged	Off
-4.2	SNA	Not engaged	Off
-4.1	SNA	Not engaged	Off
-4.0	SNA	Not engaged	Off
-3.9	SNA	Not engaged	Off
-3.8	SNA	Not engaged	Off
-3.7	SNA	Not engaged	Off
-3.6	SNA	Not engaged	Off
-3.5	SNA	Not engaged	Off
-3.4	SNA	Not engaged	Off
-3.3	SNA	Not engaged	Off
-3.2	SNA	Not engaged	Off
-3.1	SNA	Not engaged	Off
-3.0	SNA	Not engaged	Off
-2.9	SNA	Not engaged	Off
-2.8	SNA	Not engaged	Off
-2.7	SNA	Not engaged	Off
-2.6	SNA	Not engaged	Off
-2.5	SNA	Not engaged	Off
-2.4	SNA	Not engaged	Off
-2.3	SNA	Not engaged	Off
-2.2	SNA	Not engaged	Off
-2.1	SNA	Not engaged	Off
-2.0	SNA	Not engaged	Off
-1.9	SNA	Not engaged	Off
-1.8	SNA	Not engaged	Off
-1.7	SNA	Not engaged	Off
-1.6	SNA	Not engaged	Off
-1.5	SNA	Not engaged	Off
-1.4	SNA	Not engaged	Off
-1.3	SNA	Not engaged	Off
-1.2	SNA	Not engaged	Off
-1.1	SNA	Not engaged	Off
-1.0	SNA	Not engaged	Off
-0.9	SNA	Not engaged	Off
-0.8	SNA	Not engaged	Off
-0.7	SNA	Not engaged	Off
-0.6	SNA	Not engaged	Off
-0.5	SNA	Not engaged	Off
-0.4	SNA	Not engaged	Off
-0.3	SNA	Not engaged	Off
-0.2	SNA	Not engaged	Off
-0.1	SNA	Not engaged	Off

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/Frame Number	2T3F1RFV9RC*****
User	
Case Number	
EDR Data Imaging Date	
Crash Date	
Filename	RAV 4.CDRX
Saved on	
Imaged with CDR version	Crash Data Retrieval Tool 23.3
Imaged with Software Licensed to (Company Name)	Company Name information was removed when this file was saved without VIN sequence number
Reported with CDR version	Crash Data Retrieval Tool 23.3
Reported with Software Licensed to (Company Name)	NHTSA
EDR Device Type	Airbag Control Module
Event(s) recovered	Front/Rear/Side Events (1), Side Events (1), Rollover Events (1)

Comments

No comments entered.

Data Limitations

CDR Record Information:

- Due to limitations of the data recorded by the airbag ECU, such as the resolution, data range, sampling interval, time period of the recording, and the items recorded, the information provided by this data may not be sufficient to capture the entire crash.
- Pre-Crash data is recorded in discrete intervals. Due to different refresh rates within the vehicle's electronics, the data recorded may not be synchronous to each other.
- Airbag ECU data should be used in conjunction with other physical evidence obtained from the vehicle and the surrounding circumstances.
- If any of the front passenger seat airbags, side airbags, or Curtain Shield Airbags have deployed, data will not be overwritten or deleted by the airbag ECU following that event. If none of the airbags have deployed, the data of that event may be overwritten by a following event even if other airbags (pretensioner, rear seat airbag, etc.) have deployed.
- If power supply to the airbag ECU is lost during an event, all or part of the data may not be recorded.
- "Diagnostic Trouble Codes" are information about faults when a recording trigger is established. Various diagnostic trouble codes could be set and recorded due to component or system damage during an accident.
- The airbag ECU records only diagnostic information related to the airbag system. It does not record diagnostic information related to other vehicle systems.
- The TaSCAN, Global Tech Stream, or Intelligent Tester II devices (or any other Toyota genuine diagnostic tool) can be used to obtain detailed information on the diagnostic trouble codes from the airbag system, as well as diagnostic information from other systems. However, in some cases, the diagnostic trouble codes of the airbag system recorded by the airbag ECU when the event occurred may not match the diagnostic trouble codes read out when the diagnostic tool is used.

General Information:

- The data recording specifications of Toyota's airbag ECUs are divided into the following categories. The specifications for 12EDR or later are designed to be compatible with NHTSA's 49CFR Part 563 rule.
 - 00EDR / 02EDR / 04EDR / 06EDR / 10EDR / 12EDR / 13EDR / 15EDR / 17EDR / 19EDR / 21EDR / 22EDR / 23EDR / 24EDR
- The airbag ECU records data for all or some of the following accident types: frontal crash, rear crash , side crash, and rollover events. Depending on the installed airbag ECU, data for side crash and/or rollover events may not be recorded.
- The airbag ECU has the following recording pages (memory maps) for each accident type to store event data: four pages for frontal/rear/side crash, four pages for a side crash, and two pages for rollover event.
- When a crash impact for a lateral direction is occurred, data may be recorded in a page for frontal/rear/side crash. And additional data may be recorded in a page for side crash.
- The data recorded by the airbag ECU includes correlating information between each previously occurring event (i.e., information that clarifies the collision event sequence. This correlation information consists of the following items.
 - Time from Previous TRG
 - TRG Count
 - Previous Crash Type
- In frontal/rear/side crash events, earlier point in the following is regarded as time zero for the recorded data.
 - the first point where a longitudinal cumulative delta-V of over 0.8 km/h (0.5 mph) is reached
 - the first point where a lateral cumulative delta-V of over 0.8 km/h (0.5 mph) is reached
 In side crash event and rollover event, the point in time at which the recording trigger is established is regarded as time zero for the recorded data.
- The recording trigger judgment threshold value differs depending on the collision type (i.e., frontal crash, rear crash, side crash, or rollover event).

- Some of the data recorded by the airbag ECU is transmitted to the airbag ECU from various vehicle control modules by the vehicle's Controller Area Network (CAN).
- In some cases, the airbag ECU part number printed on the ECU label may not match the airbag ECU part number that the CDR tool reports. The part number retrieved by the CDR tool should be considered as the official ECU part number.
- In frontal/rear/side collision events, the record time varies depending on the period during which a longitudinal and lateral cumulative delta-V of over 0.8 km/h (0.5 mph) is reached, and time series data is recorded for up to 250 ms. The record time described above is indicated as "Length of Delta-V". "Delta-V, Longitudinal" outside the record time is indicated by area shaded in the table, and not indicated in the graph.

Data Element Sign Convention:

The following table provides an explanation of the sign notation for data elements that may be included in this CDR report.

Data Element Name	Positive Sign Notation Indicates
Maximum Delta-V, Longitudinal	Forward
Delta-V, Longitudinal	Forward
Delta-V, Lateral	Left to Right
Lateral Acceleration, Side Satellite Sensor 1	Left to Right
Lateral Acceleration, Side Satellite Sensor 2	Left to Right
Lateral Acceleration, Side Satellite Sensor 3	Left to Right
Lateral Acceleration, Side Satellite Sensor 4	Left to Right
Rate of Change of Pressure, Side Satellite Sensor 1	The pressure of a door interior is applied.
Rate of Change of Pressure, Side Satellite Sensor 2	The pressure of a door interior is applied.
Rate of Change of Pressure, Side Satellite Sensor 3	The pressure of a door interior is applied.
Rate of Change of Pressure, Side Satellite Sensor 4	The pressure of a door interior is applied.
Lateral Acceleration for Side Crash, Floor Sensor	Left to Right
Roll Angle Peak	Clockwise Rotation
Roll Angle at the Time of TRG	Clockwise Rotation
Roll Rate	Clockwise Rotation
Lateral Acceleration for Rollover, Floor Sensor	Left to Right
Longitudinal Acceleration, VSC Sensor	Forward
Yaw Rate	Left Turn
Steering Input	Left Turn

Data Definitions:

- After "Freeze Signal" has been turned ON, subsequent events will not be recorded in the recording page.
- "Recording Status" indicates a state in which all recorded event data has been written into the non-volatile memory, or a state in which this process was interrupted and not fully written into the non-volatile memory. If "Recording Status" is "Incomplete", recorded event data may not be valid.
- "Engine RPM" indicates the number of engine revolutions, not the number of motor revolutions. The recorded value has an upper limit of 12,800 rpm. Resolution is 100 rpm and the value is rounded down and recorded. For example, if the actual engine speed is 799 rpm, the recorded value will be 700 rpm.
- If the electric vehicle is using a calculated/virtual engine RPM for drivetrain control, "Engine RPM" may be recorded, but should not be used during data analysis.
- The upper limit for the recorded "Vehicle Speed" value is 200 km/h (125mph). Resolution is 1km/h (0.6mph) and the value is rounded down and recorded. The accuracy of the "Vehicle Speed" value can be affected by various factors. These include, but not limited, to the following.
 - Significant changes in the tire's rolling radius
 - Wheel lock and wheel slip
- "Accelerator Pedal" value is recorded as a percentage. The percentage increases as the driver depresses the accelerator.
- If M/T transmission vehicle of some limited model, "Shift Position" may display "Drive" regardless of the actual shift position.
- Depending on the type of occupant sensor installed in the vehicle, one of the following three recording formats for "Occupant Size Classification, Front Passenger" will be utilized.
 - Occupied / Not Occupied
 - AM50 / AF05 / Child / Not Occupied
 - AM50 / AF05 / Child or Not Occupied
- "Cruise Control Status" indicates whether the cruise control system is actuated or not. OFF indicates that the cruise control system is not actuated, but can also indicate that the vehicle is not equipped with the system.
- "Air Bag Warning Lamp, On/Off", "Ignition Cycle, Crash", "Seat Track Position Switch, Foremost, Status, Driver", "Occupant Size Classification, Front Passenger", "Safety Belt Status, Driver", "Safety Belt Status, Front Passenger", "Frontal Air Bag Suppression Switch Status, Front Passenger", and "RSCA Disable Switch" indicate the state approximately 1 second before time zero. They may not always indicate the state at the moment of collision.
- The upper and lower limits for the recorded value of "Motor RPM" is 17,500 rpm and -7,500 rpm respectively. Resolution is 100 rpm and the value is rounded down and recorded.
- "Brake Oil Pressure" has an upper limit of 12.14 Mpa. In the case of the vehicle that has not VSC system, "0 Mpa" or "Invalid" may be displayed.
- "Longitudinal Acceleration, VSC Sensor" has upper and lower limits for the recorded value of 8.973 m/s² and -8.973 m/s² respectively. This acceleration sensor does not sense collisions.
- "Sequential Shift Range" displaying "Undetermined" indicates the shift range is undetermined or was not being used.
- Some vehicles will not be equipped with all "Drive Mode" types indicated in the "Drive Mode" table. If some or all drive modes are not applicable to vehicle, "OFF" or "Invalid" may be displayed. The item in the "Drive Mode" table may not match the name of switch or indicator that equipped the vehicle.
- The upper and lower limits for the recorded value of "Steering Input" is 375 deg and -375 deg respectively. Resolution is 1.5 deg and the value is rounded down and recorded.
- Resolution of the "Air Bag Warning Lamp ON Time Since DTC was Set" is 15 minutes, and the value is rounded down and recorded.

- "Delta-V, Longitudinal" indicates the change in forward speed after time zero. This does not refer to vehicle speed, and it does not include the change in speed during the period from the start of the actual collision to establishment of the time zero.
- "Location of Side Satellite Sensor" shows the outline of a typical sensor position. Sensory location can be confirmed using the repair manual.
- "TRG Count" indicates a calculated value of the number of times recording triggers have been established for all crash types. The sequence in which each event occurred can be verified from the "TRG Count". The smaller the "TRG Count" value, the older the data. The upper limit for the recorded value is 65,533 times. When more than one event reaches the upper limit, the actual "TRG Count" may be greater than what is displayed for that event.
- The TRG count may indicate "not available", when a trigger count could not be provided. Other information in the recorded events can help identify event timing.
- Resolution of the "Time from Pre-Crash to TRG" is 50 [ms], and the value is rounded up and recorded.
- "Time from Previous TRG" indicates the time between the establishment of a most recent event's recording trigger to the establishment of a latest event's recording trigger. The upper limit for the recorded value is 32.767 seconds. In the event of establishment of the first recording trigger after the ignition is switched ON, the upper limit value(max value) is recorded.
- "Roll Angle at the Time of TRG" and "Roll Angle Peak" do not represent the actual roll angle of the vehicle. These values are used internally by the airbag ECU for sensing a rollover.
- Depending on the type of satellite sensor installed in the vehicle, "Lateral Acceleration" or "Rate of Change of Pressure" is displayed as Side satellite sensor. "Rate of Change of Pressure" indicates that of a door interior. 0% is displayed when the pressure of a door interior is equal with the outside air pressure.
- Depending on the type of satellite sensor installed in the vehicle, "Clipping Time, Lateral Acceleration" or "Clipping Time, Rate of Change of Pressure" is displayed.
- "VSC Control Status" displaying "OFF+ (disable)" indicates VSC is disable (a part of the behavior stabilization control is operated).
- "Trip count" indicates the number of ignition power applying to a vehicle. The upper limit for the recorded value is 65534 times. When trip count reaches the upper limit value, trip count is reset at the next counting up.
- "Time count input system" indicates a count method of "Time count" and "Trip count".
 - Normal: Airbag ECU correct the count value with vehicle common value and count it up.
 - IG: ECU uniquely counts up regardless of vehicle common value. (In case of IG system ECU.)
 - ACC: ECU uniquely counts up regardless of vehicle common value. (In case of ACC system ECU.)
 - +B: ECU uniquely counts up regardless of vehicle common value. (In case of +B system ECU.)
- "Time count" indicates time from ignition power applying. The upper limit for the recorded value is 1,677,721,400ms. The resolution is 100ms and the value is rounded down and recorded.

05017_ToyotaS00std_r040

System Status at Retrieval

ECU Part Number	89170-0R351
EDR Generation	17EDR
Complete File Recorded	Yes
Ignition Cycle, Download (times)	137
Multi-Event, Number of Events (times)	2 or greater
Time from Event 1 to 2 (sec)	0.129
Diagnostic Trouble Codes Exist	No
Location of Side Satellite Sensor 1, L	front door
Location of Side Satellite Sensor 2, L	B-Pillar
Location of Side Satellite Sensor 3, L	Not Equipped
Location of Side Satellite Sensor 4, L	Not Equipped
Location of Side Satellite Sensor 1, R	front door
Location of Side Satellite Sensor 2, R	B-Pillar
Location of Side Satellite Sensor 3, R	Not Equipped
Location of Side Satellite Sensor 4, R	Not Equipped
Location of Floor Sensor	Airbag ECU
Vehicle Type, Variant and Version	TVV Information Not Required

Event Record Summary at Retrieval

Events Recorded	TRG Count	Crash Type	Time (msec)	Pre-Crash Recording Status	Diagnostic Data Recording Status	Occupant Data Recording Status	Crash Info Recording Status	Time Series Recording Status
Most Recent Event	3	Rollover	0	Complete	Complete	Complete	Complete	Complete
1st Prior Event	2	Frontal/Rear/Side Crash	-128.5	Complete	Complete	Complete	Complete	Complete
2nd Prior Event	1	Side Crash	N/A	N/A	Complete	N/A	N/A	Complete

System Status at Event (Most Recent Event, TRG 3)

TRG Count (times)	3
Event Type	Rollover
Previous Crash Type	Frontal/Rear/Side Crash
Time from Previous TRG (msec)	86.5
Freeze Signal	OFF
Freeze Signal Factor	None
Recording Status, Rollover Crash Info.	Complete
Odometer signal (miles [km])	138 [222]
Trip count (times)	74
Time count (msec)	314,500
Time count input system	Normal

Deployment Command Data (Most Recent Event, TRG 3)

Pretensioner Deployment, Time to Fire, 1st Seat, Driver (msec)	No
Pretensioner Deployment, Time to Fire, 1st Seat, Passenger (msec)	No
Pretensioner Deployment, Time to Fire, 2nd Seat, Driver (msec)	No
Pretensioner Deployment, Time to Fire, 2nd Seat, Passenger (msec)	No
Side Curtain Airbag Deployment, Time to Deploy, Driver (msec)	No
Side Curtain Airbag Deployment, Time to Deploy, Passenger (msec)	No

DTCs Present at Time of Event (Most Recent Event, TRG 3)

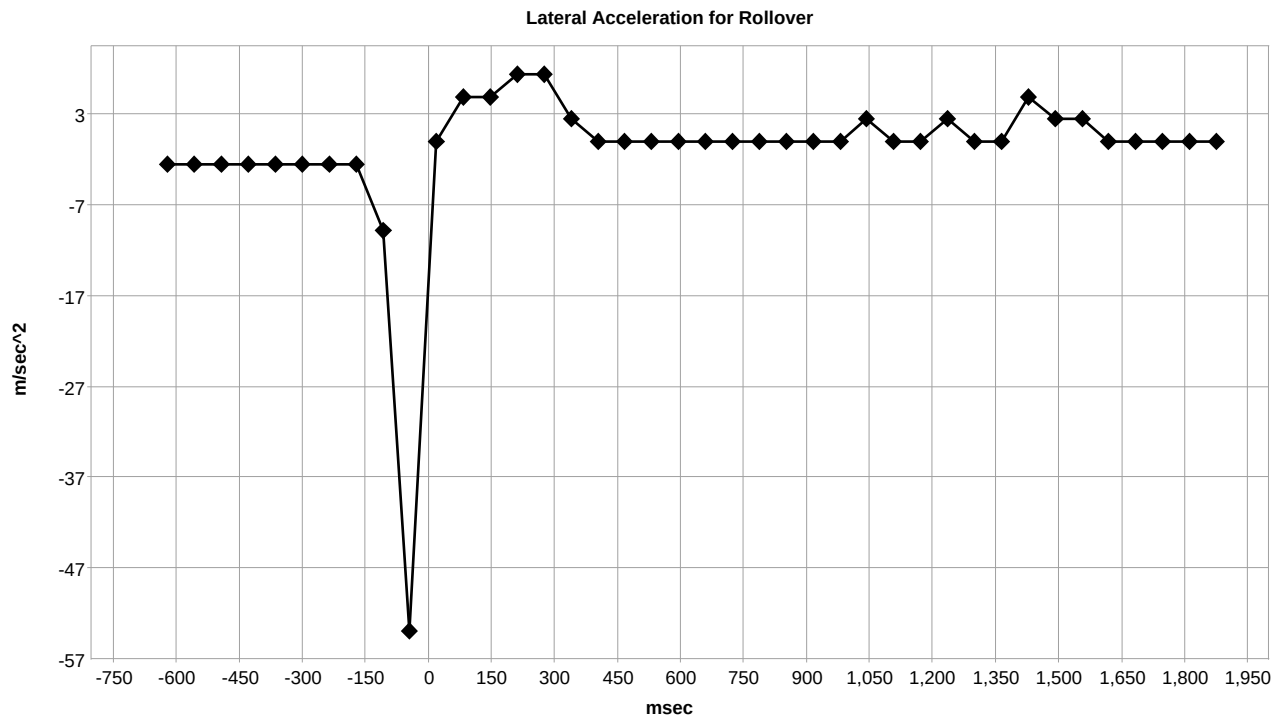
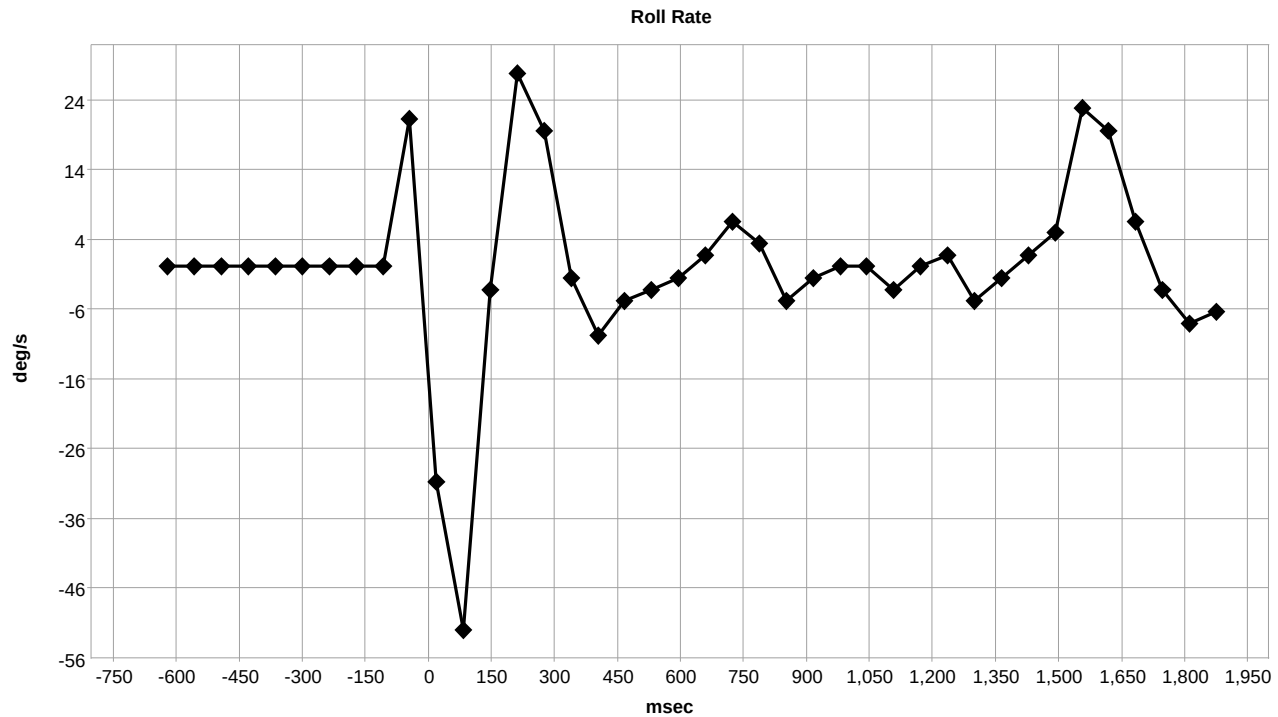
Recording Status, Diagnostic	Complete
Ignition Cycle Since DTC was Set (times)	0
Airbag Warning Lamp ON Time Since DTC was Set (min)	0
Diagnostic Trouble Codes	None

Pre-Crash Data, 1 Sample (Most Recent Event, TRG 3)

Recording Status, Occupant	Complete
Recording Status, Pre-Crash	Complete
Time from Pre-Crash to TRG (msec)	150
Safety Belt Status, Driver	ON
Safety Belt Status, Front Passenger	OFF
Occupant Size Classification, Front Passenger	Child or Not Occupied
Frontal Airbag Suppression Switch Status, Front Passenger	SNA
RSCA Disable Switch	SNA
Seat Track Position Switch, Foremost, Status, Driver	No
Airbag Warning Lamp, On/Off	OFF
Ignition Cycle, Crash (times)	47

Rollover Crash Pulse (Most Recent Event, TRG 3)

Recording Status, Time Series Data	Complete
Time from TRG to Next Sample (msec)	20
RollAngle Peak (degrees)	-5.3
Roll Angle at the Time of TRG (degrees)	-1.5



Rollover Crash Pulse (Most Recent Event, TRG 3)

Time (msec)	Roll Rate (deg/s)	Lateral Acceleration for Rollover (m/s^2)
-620	0.0	-2.5
-556	0.0	-2.5
-492	0.0	-2.5
-428	0.0	-2.5
-364	0.0	-2.5
-300	0.0	-2.5
-236	0.0	-2.5
-172	0.0	-2.5
-108	0.0	-9.8
-44	21.2	-53.9
20	-30.9	0.0
84	-52.1	4.9
148	-3.3	4.9
212	27.7	7.4
276	19.5	7.4
340	-1.6	2.5
404	-9.8	0.0
468	-4.9	0.0
532	-3.3	0.0
596	-1.6	0.0
660	1.6	0.0
724	6.5	0.0
788	3.3	0.0
852	-4.9	0.0
916	-1.6	0.0
980	0.0	0.0
1044	0.0	2.5
1108	-3.3	0.0
1172	0.0	0.0
1236	1.6	2.5
1300	-4.9	0.0
1364	-1.6	0.0
1428	1.6	4.9
1492	4.9	2.5
1556	22.8	2.5
1620	19.5	0.0
1684	6.5	0.0
1748	-3.3	0.0
1812	-8.1	0.0
1876	-6.5	0.0

Pre-Crash Data -5 to 0 Seconds (Most Recent Event, TRG 3) - Table 1 of 4

Time (sec)	Vehicle Speed (MPH [km/h])	Accelerator Pedal, % Full (%)	Percentage of Engine Throttle (%)	Fuel Injection Quantity (mm ³ /st)	Engine RPM (RPM)	Motor RPM (RPM)	Service Brake, ON/OFF
-4.65	8.7 [14]	0.0	0.0	Invalid	1,800	Invalid	ON
-4.15	8.7 [14]	0.0	0.0	Invalid	1,600	Invalid	ON
-3.65	8.7 [14]	10.0	9.5	Invalid	1,000	Invalid	OFF
-3.15	8.7 [14]	37.0	11.0	Invalid	1,400	Invalid	OFF
-2.65	9.9 [16]	0.0	0.0	Invalid	1,400	Invalid	OFF
-2.15	9.9 [16]	43.0	15.0	Invalid	1,300	Invalid	OFF
-1.65	11.2 [18]	59.5	31.5	Invalid	1,900	Invalid	OFF
-1.15	13.7 [22]	79.5	39.0	Invalid	2,000	Invalid	OFF
-0.65	14.9 [24]	90.0	14.0	Invalid	1,800	Invalid	OFF
-0.15	16.2 [26]	100.0	89.5	Invalid	2,500	Invalid	OFF
TRG(0)	13.7 [22]	100.0	100.0	Invalid	3,100	Invalid	OFF

Pre-Crash Data -5 to 0 Seconds (Most Recent Event, TRG 3) - Table 2 of 4

Time (sec)	ABS Control Status	BOS Control Status	Brake Oil Pressure (Mpa)	Longitudinal Acceleration , VSC Sensor (m/s ²)	Yaw Rate (deg/s)	Steering Input (degrees)	Shift Position
-4.65	OFF	OFF	0.19	0.215	-0.98	-6.0	D
-4.15	OFF	OFF	0.00	0.144	-0.98	-6.0	D
-3.65	OFF	OFF	0.00	-0.215	5.37	63.0	D
-3.15	OFF	OFF	0.00	0.574	11.71	127.5	D
-2.65	OFF	OFF	0.00	0.287	19.52	180.0	D
-2.15	OFF	OFF	0.00	-0.359	22.45	198.0	D
-1.65	OFF	OFF	0.00	0.933	26.35	216.0	D
-1.15	OFF	OFF	0.00	1.436	32.21	220.5	D
-0.65	OFF	OFF	0.00	-0.790	37.58	235.5	D
-0.15	OFF	OFF	0.00	0.072	39.53	234.0	D
TRG(0)	OFF	OFF	0.00	-4.737	61.00	240.0	D

Pre-Crash Data -5 to 0 Seconds (Most Recent Event, TRG 3) - Table 3 of 4

Time (sec)	Sequential Shift Range	Cruise Control Status	VSC Control Status	READY Signal	Drive Mode, Power Train	Drive Mode, Snow	Drive Mode, EV
-4.65	Undetermined	OFF	ON (enable)	Invalid	ECO	OFF	Invalid
-4.15	Undetermined	OFF	ON (enable)	Invalid	ECO	OFF	Invalid
-3.65	Undetermined	OFF	ON (enable)	Invalid	ECO	OFF	Invalid
-3.15	Undetermined	OFF	ON (enable)	Invalid	ECO	OFF	Invalid
-2.65	Undetermined	OFF	ON (enable)	Invalid	ECO	OFF	Invalid
-2.15	Undetermined	OFF	ON (enable)	Invalid	ECO	OFF	Invalid
-1.65	Undetermined	OFF	ON (enable)	Invalid	ECO	OFF	Invalid
-1.15	Undetermined	OFF	ON (enable)	Invalid	ECO	OFF	Invalid
-0.65	Undetermined	OFF	ON (enable)	Invalid	ECO	OFF	Invalid
-0.15	Undetermined	OFF	ON (enable)	Invalid	ECO	OFF	Invalid
TRG(0)	Undetermined	OFF	ON (enable)	Invalid	ECO	OFF	Invalid

Pre-Crash Data -5 to 0 Seconds (Most Recent Event, TRG 3) - Table 4 of 4

Time (sec)	Drive mode select signal
-4.65	ECO
-4.15	ECO
-3.65	ECO
-3.15	ECO
-2.65	ECO
-2.15	ECO
-1.65	ECO
-1.15	ECO
-0.65	ECO
-0.15	ECO

Time (sec)	Drive mode select signal
TRG(0)	ECO

System Status at Event (1st Prior Event, TRG 2)

TRG Count (times)	2
Event Type	Frontal/Rear/Side Crash
Previous Crash Type	Side Crash
Time from Previous TRG (msec)	44.0
Time from Time Zero to TRG (msec)	42.0
Event Establishment Factor	Side Crash, Right
TRG Establishment Factor	Side Crash, Right
Freeze Signal	OFF
Freeze Signal Factor	None
Recording Status , Front/Rear and Side Crash Info.	Complete
Odometer signal (miles [km])	138 [222]
Trip count (times)	74
Time count (msec)	314,400
Time count input system	Normal

Deployment Command Data (1st Prior Event, TRG 2)

Active Head Restraint, Time to Deploy, Driver (msec)	SNA
Active Head Restraint, Time to Deploy, Front Passenger (msec)	SNA
Frontal Airbag Deployment, Time to 1st Stage Deployment, Driver (msec)	No
Frontal Airbag Deployment, Time to 1st Stage Deployment, Front Passenger (msec)	No
Frontal Airbag Deployment, Time to 2nd Stage, Driver (msec)	No
Frontal Airbag Deployment, Time to 2nd Stage, Front Passenger (msec)	No
Pretensioner Deployment, Time to Fire, 1st Seat, Driver (msec)	No
Pretensioner Deployment, Time to Fire, 1st Seat, Passenger (msec)	No
Pretensioner Deployment, Time to Fire, 2nd Seat, Driver (msec)	No
Pretensioner Deployment, Time to Fire, 2nd Seat, Passenger (msec)	No
Rear Window Airbag Deployment, Time to Deploy (msec)	SNA
Side Airbag Deployment, Time to Deploy, 1st Seat, Driver (msec)	No
Side Airbag Deployment, Time to Deploy, 1st Seat, Passenger (msec)	No
Side Airbag Deployment, Time to Deploy, 2nd Seat, Driver (msec)	SNA
Side Airbag Deployment, Time to Deploy, 2nd Seat, Passenger (msec)	SNA
Side Curtain Airbag Deployment, Time to Deploy, Driver (msec)	No
Side Curtain Airbag Deployment, Time to Deploy, Passenger (msec)	No

DTCs Present at Time of Event (1st Prior Event, TRG 2)

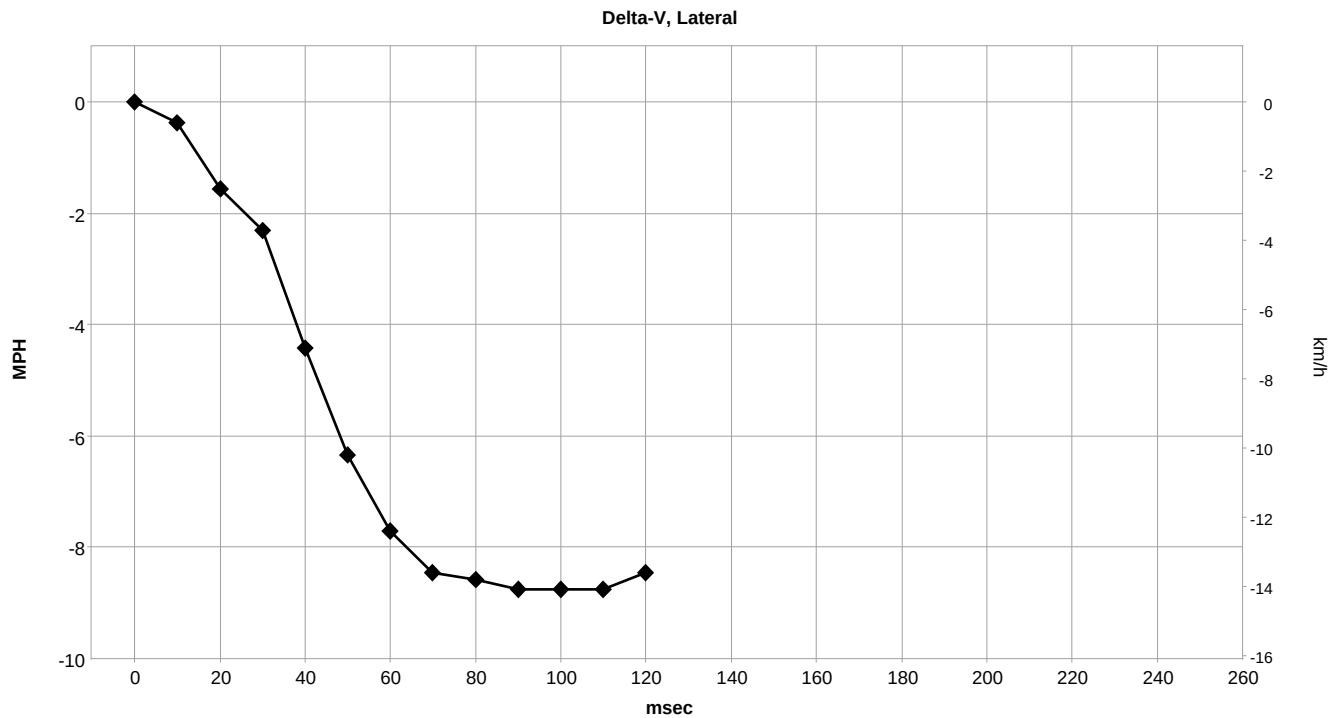
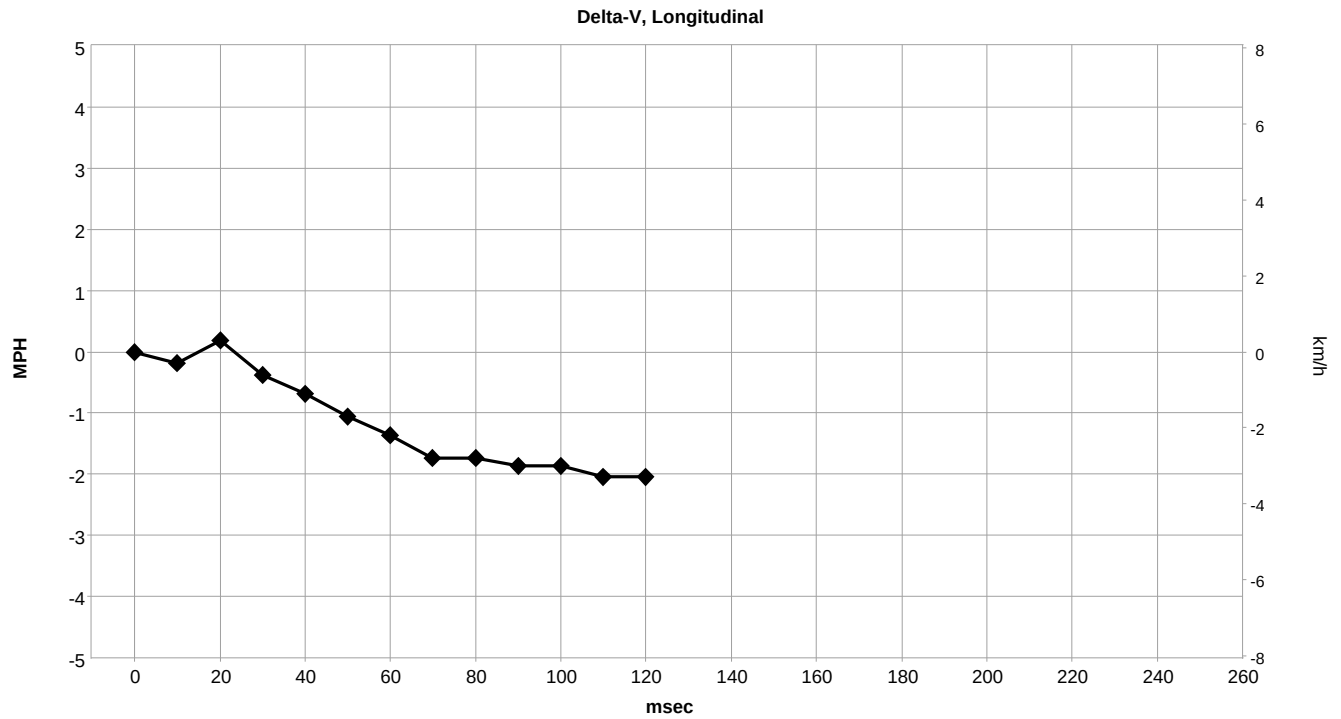
Recording Status, Diagnostic	Complete
Ignition Cycle Since DTC was Set (times)	0
Airbag Warning Lamp ON Time Since DTC was Set (min)	0
Diagnostic Trouble Codes	None

Pre-Crash Data, 1 Sample (1st Prior Event, TRG 2)

Recording Status, Occupant	Complete
Recording Status, Pre-Crash	Complete
Time from Pre-Crash to TRG (msec)	50
Safety Belt Status, Driver	ON
Safety Belt Status, Front Passenger	OFF
Occupant Size Classification, Front Passenger	Child or Not Occupied
Frontal Airbag Suppression Switch Status, Front Passenger	SNA
RSCA Disable Switch	SNA
Seat Track Position Switch, Foremost, Status, Driver	No
Airbag Warning Lamp, On/Off	OFF
Ignition Cycle, Crash (times)	47

Longitudinal/Lateral Crash Pulse (1st Prior Event, TRG 2)

Recording Status , Time Series Data	Complete
Power Supply Status at the time of Max. Delta-V	ON
Maximum Delta-V, Longitudinal (MPH [km/h])	-2.1 [-3.3]
Time, Maximum Delta-V, Longitudinal (msec)	91.5
Clipping Time, Longitudinal Delta-V (msec)	No
Clipping Time, Lateral Delta-V (msec)	No
Length of Delta-V (msec)	120



Longitudinal/Lateral Crash Pulse (1st Prior Event, TRG 2)

Time (msec)	Delta-V, Longitudinal (MPH [km/h])	Delta-V, Lateral (MPH [km/h])	Power Supply Status
0	0.0 [0.0]	0.0 [0.0]	ON
10	-0.2 [-0.3]	-0.4 [-0.6]	ON
20	0.2 [0.3]	-1.6 [-2.5]	ON
30	-0.4 [-0.6]	-2.3 [-3.7]	ON
40	-0.7 [-1.1]	-4.4 [-7.1]	ON
50	-1.1 [-1.7]	-6.3 [-10.2]	ON
60	-1.4 [-2.2]	-7.7 [-12.4]	ON
70	-1.7 [-2.8]	-8.5 [-13.6]	ON
80	-1.7 [-2.8]	-8.6 [-13.8]	ON
90	-1.9 [-3.0]	-8.8 [-14.1]	ON
100	-1.9 [-3.0]	-8.8 [-14.1]	ON
110	-2.1 [-3.3]	-8.8 [-14.1]	ON
120	-2.1 [-3.3]	-8.5 [-13.6]	ON
130	0.0 [0.0]	0.0 [0.0]	ON
140	0.0 [0.0]	0.0 [0.0]	ON
150	0.0 [0.0]	0.0 [0.0]	ON
160	0.0 [0.0]	0.0 [0.0]	ON
170	0.0 [0.0]	0.0 [0.0]	ON
180	0.0 [0.0]	0.0 [0.0]	ON
190	0.0 [0.0]	0.0 [0.0]	ON
200	0.0 [0.0]	0.0 [0.0]	ON
210	0.0 [0.0]	0.0 [0.0]	ON
220	0.0 [0.0]	0.0 [0.0]	ON
230	0.0 [0.0]	0.0 [0.0]	ON
240	0.0 [0.0]	0.0 [0.0]	ON
250	0.0 [0.0]	0.0 [0.0]	ON

Pre-Crash Data -5 to 0 Seconds (1st Prior Event, TRG 2) - Table 1 of 4

Time (sec)	Vehicle Speed (MPH [km/h])	Accelerator Pedal, % Full (%)	Percentage of Engine Throttle (%)	Fuel Injection Quantity (mm ³ /st)	Engine RPM (RPM)	Motor RPM (RPM)	Service Brake, ON/OFF
-4.55	8.7 [14]	0.0	0.0	Invalid	1,800	Invalid	ON
-4.05	8.7 [14]	0.0	0.0	Invalid	1,600	Invalid	ON
-3.55	8.7 [14]	10.0	9.5	Invalid	1,000	Invalid	OFF
-3.05	8.7 [14]	37.0	11.0	Invalid	1,400	Invalid	OFF
-2.55	9.9 [16]	0.0	0.0	Invalid	1,400	Invalid	OFF
-2.05	9.9 [16]	43.0	15.0	Invalid	1,300	Invalid	OFF
-1.55	11.2 [18]	59.5	31.5	Invalid	1,900	Invalid	OFF
-1.05	13.7 [22]	79.5	39.0	Invalid	2,000	Invalid	OFF
-0.55	14.9 [24]	90.0	14.0	Invalid	1,800	Invalid	OFF
-0.05	16.2 [26]	100.0	89.5	Invalid	2,500	Invalid	OFF
TRG(0)	16.2 [26]	100.0	89.5	Invalid	2,600	Invalid	OFF

Pre-Crash Data -5 to 0 Seconds (1st Prior Event, TRG 2) - Table 2 of 4

Time (sec)	ABS Control Status	BOS Control Status	Brake Oil Pressure (Mpa)	Longitudinal Acceleration , VSC Sensor (m/s ²)	Yaw Rate (deg/s)	Steering Input (degrees)	Shift Position
-4.55	OFF	OFF	0.19	0.215	-0.98	-6.0	D
-4.05	OFF	OFF	0.00	0.144	-0.98	-6.0	D
-3.55	OFF	OFF	0.00	-0.215	5.37	63.0	D
-3.05	OFF	OFF	0.00	0.574	11.71	127.5	D
-2.55	OFF	OFF	0.00	0.287	19.52	180.0	D
-2.05	OFF	OFF	0.00	-0.359	22.45	198.0	D
-1.55	OFF	OFF	0.00	0.933	26.35	216.0	D
-1.05	OFF	OFF	0.00	1.436	32.21	220.5	D
-0.55	OFF	OFF	0.00	-0.790	37.58	235.5	D
-0.05	OFF	OFF	0.00	0.072	39.53	234.0	D
TRG(0)	OFF	OFF	0.00	-4.307	60.02	226.5	D

Pre-Crash Data -5 to 0 Seconds (1st Prior Event, TRG 2) - Table 3 of 4

Time (sec)	Sequential Shift Range	Cruise Control Status	VSC Control Status	READY Signal	Drive Mode, Power Train	Drive Mode, Snow	Drive Mode, EV
-4.55	Undetermined	OFF	ON (enable)	Invalid	ECO	OFF	Invalid
-4.05	Undetermined	OFF	ON (enable)	Invalid	ECO	OFF	Invalid
-3.55	Undetermined	OFF	ON (enable)	Invalid	ECO	OFF	Invalid
-3.05	Undetermined	OFF	ON (enable)	Invalid	ECO	OFF	Invalid
-2.55	Undetermined	OFF	ON (enable)	Invalid	ECO	OFF	Invalid
-2.05	Undetermined	OFF	ON (enable)	Invalid	ECO	OFF	Invalid
-1.55	Undetermined	OFF	ON (enable)	Invalid	ECO	OFF	Invalid
-1.05	Undetermined	OFF	ON (enable)	Invalid	ECO	OFF	Invalid
-0.55	Undetermined	OFF	ON (enable)	Invalid	ECO	OFF	Invalid
-0.05	Undetermined	OFF	ON (enable)	Invalid	ECO	OFF	Invalid
TRG(0)	Undetermined	OFF	ON (enable)	Invalid	ECO	OFF	Invalid

Pre-Crash Data -5 to 0 Seconds (1st Prior Event, TRG 2) - Table 4 of 4

Time (sec)	Drive mode select signal
-4.55	ECO
-4.05	ECO
-3.55	ECO
-3.05	ECO
-2.55	ECO
-2.05	ECO
-1.55	ECO
-1.05	ECO
-0.55	ECO
-0.05	ECO

Time (sec)	Drive mode select signal
TRG(0)	ECO

System Status at Event (2nd Prior Event, TRG 1)

TRG Count (times)	1
Event Type	Side Crash
Previous Crash Type	No Event
Time from Previous TRG (msec)	32767 or greater
Freeze Signal	OFF
Freeze Signal Factor	None
Odometer signal (miles [km])	138 [222]
Trip count (times)	74
Time count (msec)	314,400
Time count input system	Normal

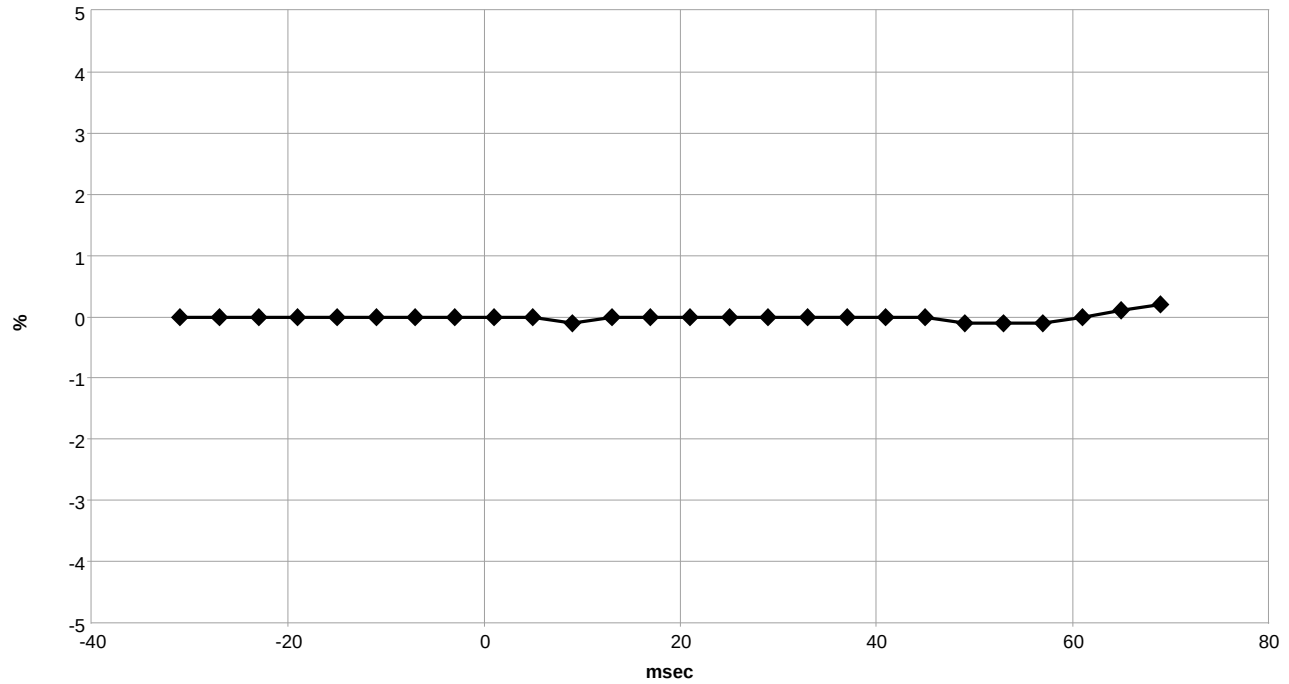
DTCs Present at Time of Event (2nd Prior Event, TRG 1)

Recording Status, Diagnostic	Complete
Ignition Cycle Since DTC was Set (times)	0
Airbag Warning Lamp ON Time Since DTC was Set (min)	0
Diagnostic Trouble Codes	None

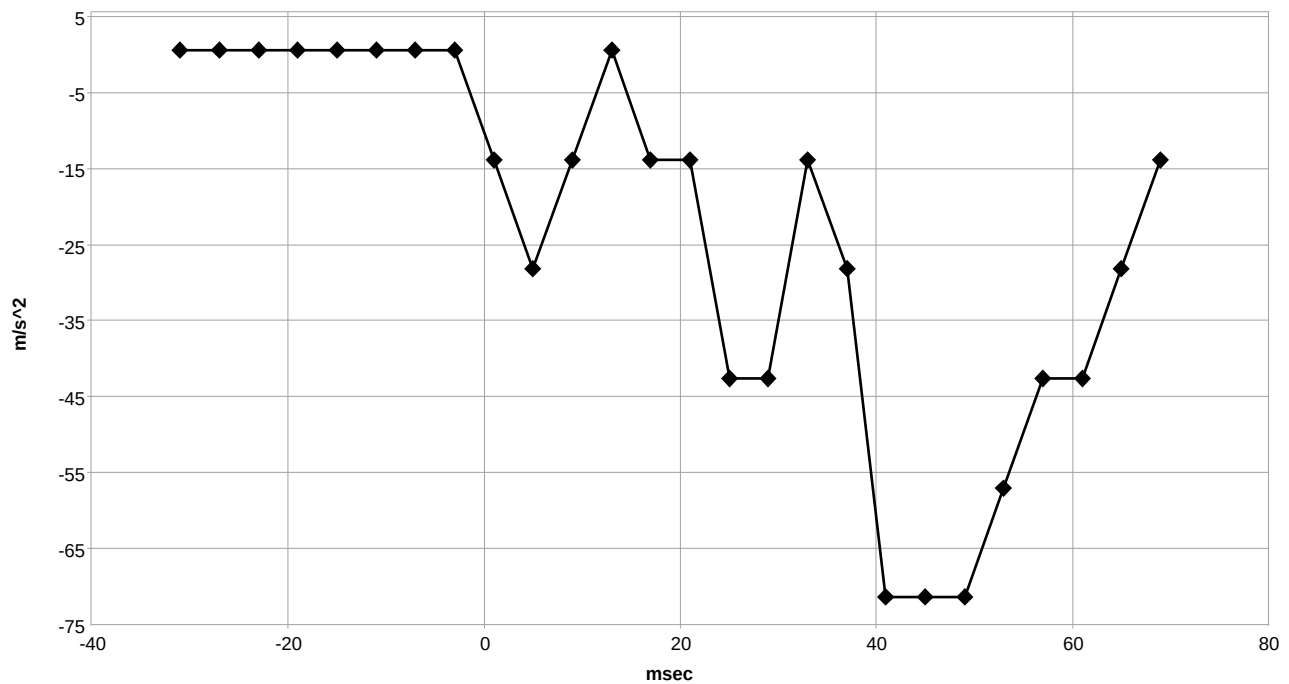
Lateral Crash Pulse (2nd Prior Event, TRG 1)

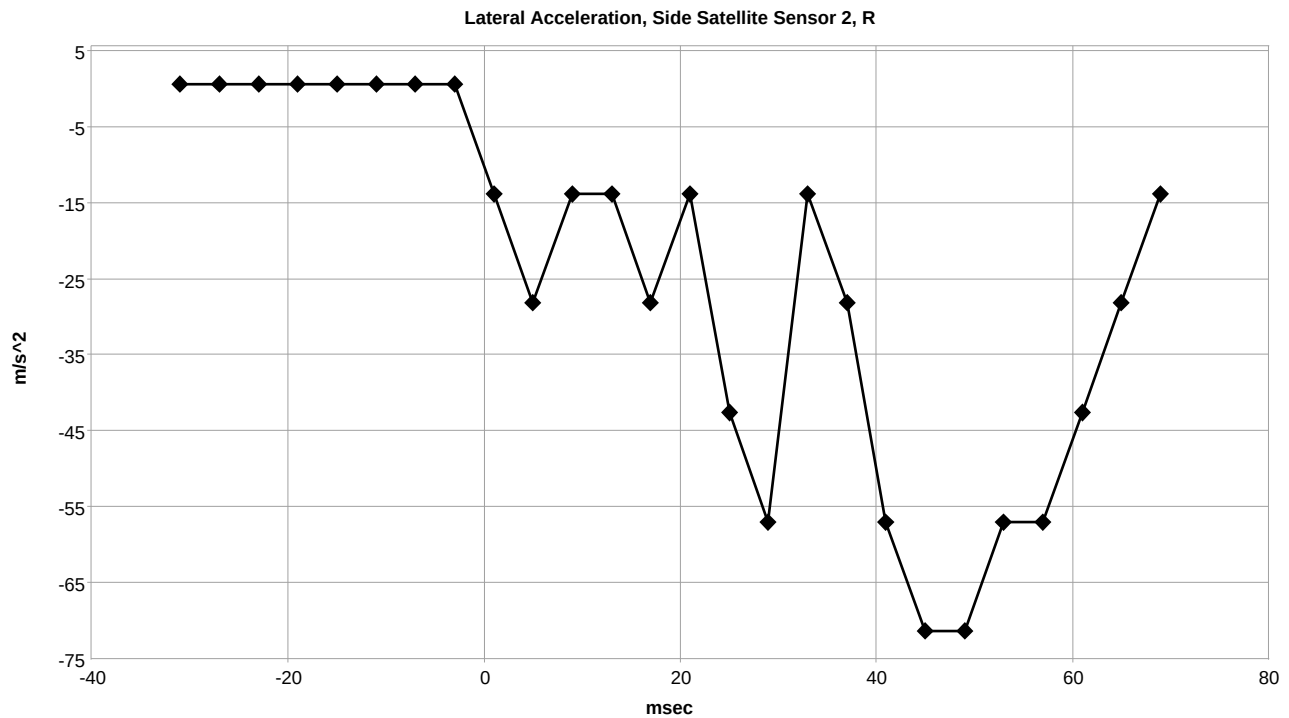
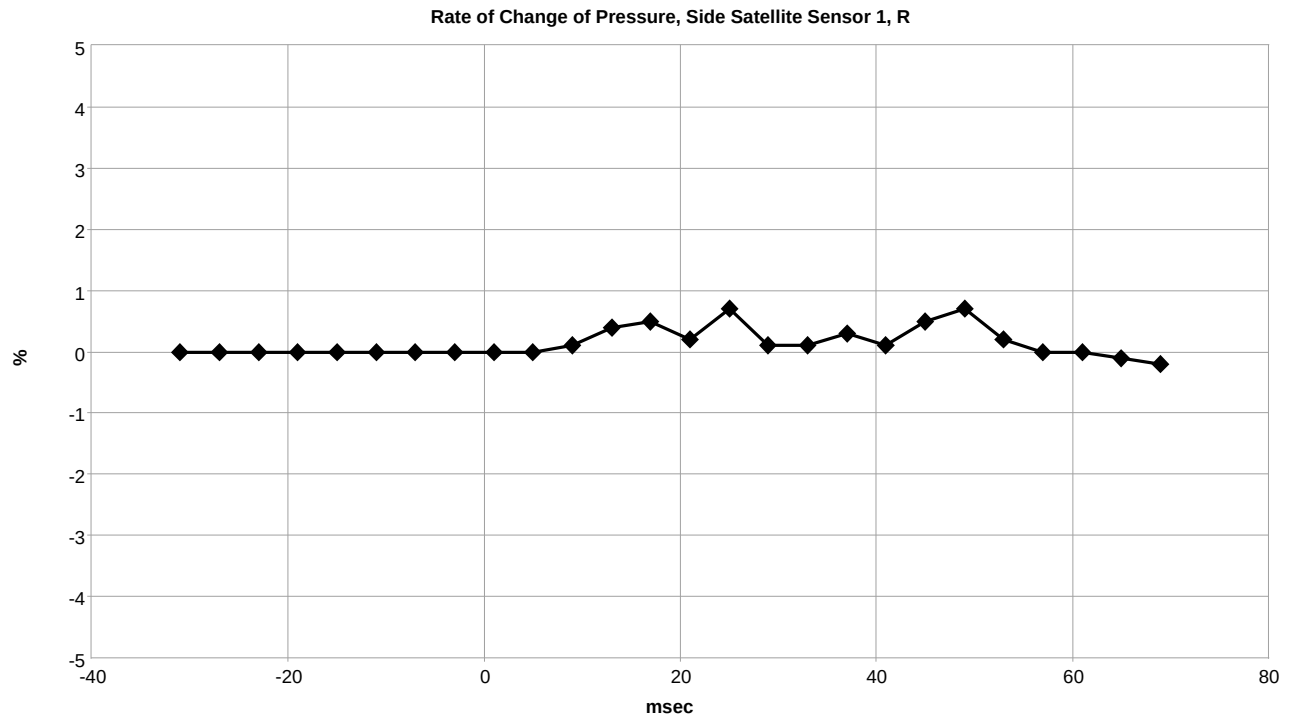
Recording Status , Time Series Data	Complete
Time from TRG to Next Sample (msec)	1
Clipping Time, Rate of Change of Pressure, Side Satellite Sensor 1, L (msec)	No
Clipping Time, Lateral Acceleration, Side Satellite Sensor 2, L (msec)	No
Clipping Time, Lateral Acceleration, Side Satellite Sensor 3, L (msec)	SNA
Clipping Time, Lateral Acceleration, Side Satellite Sensor 4, L (msec)	SNA
Clipping Time, Rate of Change of Pressure, Side Satellite Sensor 1, R (msec)	No
Clipping Time, Lateral Acceleration, Side Satellite Sensor 2, R (msec)	No
Clipping Time, Lateral Acceleration, Side Satellite Sensor 3, R (msec)	SNA
Clipping Time, Lateral Acceleration, Side Satellite Sensor 4, R (msec)	SNA
Clipping Time, Lateral Acceleration, Floor Sensor (msec)	No

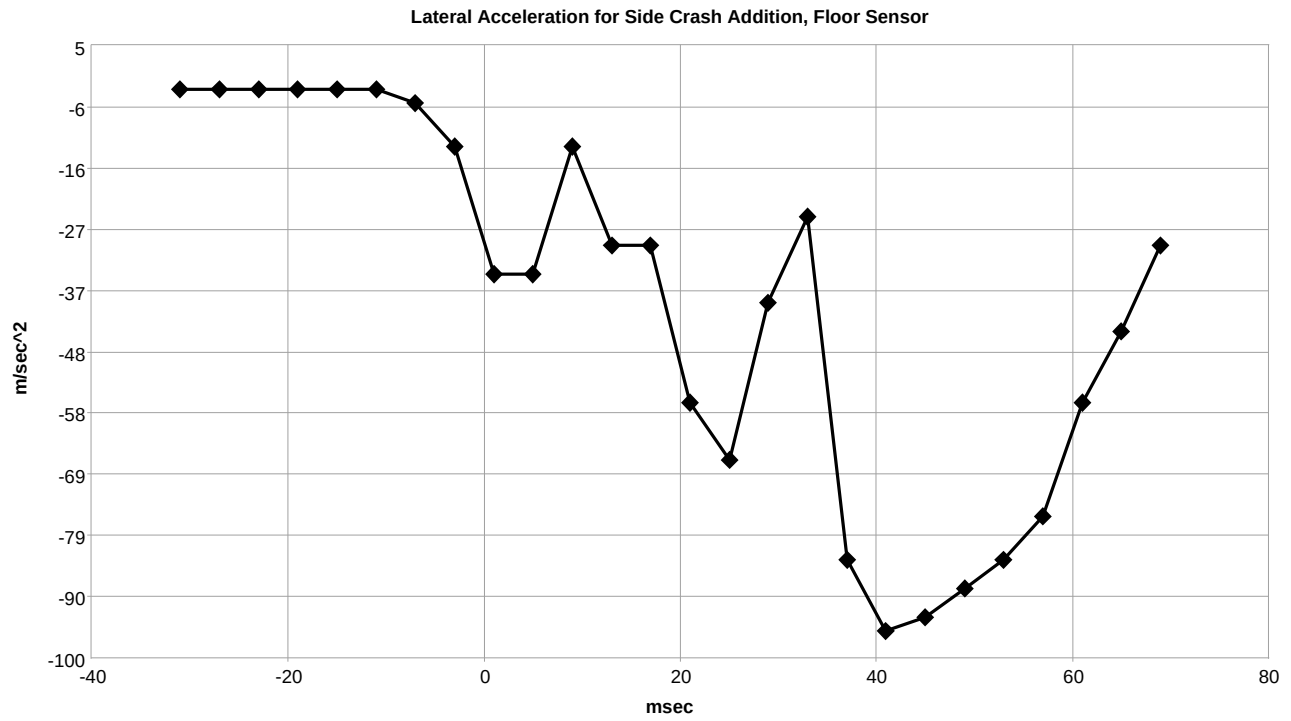
Rate of Change of Pressure, Side Satellite Sensor 1, L



Lateral Acceleration, Side Satellite Sensor 2, L







Lateral Crash Pulse (2nd Prior Event, TRG 1) - Table 1 of 2

Time (msec)	Rate of Change of Pressure, Side Satellite Sensor 1, L (%)	Lateral Acceleration, Side Satellite Sensor 2, L (m/s^2)	Lateral Acceleration, Side Satellite Sensor 3, L (m/s^2)	Lateral Acceleration, Side Satellite Sensor 4, L (m/s^2)	Rate of Change of Pressure, Side Satellite Sensor 1, R (%)	Lateral Acceleration, Side Satellite Sensor 2, R (m/s^2)	Lateral Acceleration, Side Satellite Sensor 3, R (m/s^2)	Lateral Acceleration, Side Satellite Sensor 4, R (m/s^2)
-31	0.0	0.0	SNA	SNA	0.0	0.0	SNA	SNA
-27	0.0	0.0	SNA	SNA	0.0	0.0	SNA	SNA
-23	0.0	0.0	SNA	SNA	0.0	0.0	SNA	SNA
-19	0.0	0.0	SNA	SNA	0.0	0.0	SNA	SNA
-15	0.0	0.0	SNA	SNA	0.0	0.0	SNA	SNA
-11	0.0	0.0	SNA	SNA	0.0	0.0	SNA	SNA
-7	0.0	0.0	SNA	SNA	0.0	0.0	SNA	SNA
-3	0.0	0.0	SNA	SNA	0.0	0.0	SNA	SNA
1	0.0	-14.4	SNA	SNA	0.0	-14.4	SNA	SNA
5	0.0	-28.7	SNA	SNA	0.0	-28.7	SNA	SNA
9	-0.1	-14.4	SNA	SNA	0.1	-14.4	SNA	SNA
13	0.0	0.0	SNA	SNA	0.4	-14.4	SNA	SNA
17	0.0	-14.4	SNA	SNA	0.5	-28.7	SNA	SNA
21	0.0	-14.4	SNA	SNA	0.2	-14.4	SNA	SNA
25	0.0	-43.1	SNA	SNA	0.7	-43.1	SNA	SNA
29	0.0	-43.1	SNA	SNA	0.1	-57.5	SNA	SNA
33	0.0	-14.4	SNA	SNA	0.1	-14.4	SNA	SNA
37	0.0	-28.7	SNA	SNA	0.3	-28.7	SNA	SNA
41	0.0	-71.9	SNA	SNA	0.1	-57.5	SNA	SNA
45	0.0	-71.9	SNA	SNA	0.5	-71.9	SNA	SNA
49	-0.1	-71.9	SNA	SNA	0.7	-71.9	SNA	SNA
53	-0.1	-57.5	SNA	SNA	0.2	-57.5	SNA	SNA
57	-0.1	-43.1	SNA	SNA	0.0	-57.5	SNA	SNA
61	0.0	-43.1	SNA	SNA	0.0	-43.1	SNA	SNA
65	0.1	-28.7	SNA	SNA	-0.1	-28.7	SNA	SNA
69	0.2	-14.4	SNA	SNA	-0.2	-14.4	SNA	SNA

Lateral Crash Pulse (2nd Prior Event, TRG 1) - Table 2 of 2

Time (msec)	Lateral Acceleration for Side Crash Addition, Floor Sensor (m/s^2)
-31	-2.5
-27	-2.5
-23	-2.5
-19	-2.5
-15	-2.5
-11	-2.5
-7	-4.9
-3	-12.3
1	-34.3
5	-34.3
9	-12.3
13	-29.4
17	-29.4
21	-56.4
25	-66.2
29	-39.2
33	-24.5
37	-83.4
41	-95.6
45	-93.2
49	-88.3
53	-83.4
57	-76.0
61	-56.4
65	-44.1
69	-29.4

2022 VW ID.4

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	WVGUNPE25NP*****
User	
Case Number	
EDR Data Imaging Date	
Crash Date	
Filename	V2EDR.CDRX
Saved on	
Imaged with CDR version	Crash Data Retrieval Tool 23.0
Imaged with Software Licensed to (Company Name)	NHTSA
Reported with CDR version	Crash Data Retrieval Tool 23.0
Reported with Software Licensed to (Company Name)	NHTSA
EDR Device Type	Airbag Control Module
Event(s) recovered	Record 1 (CRC Check Failed - Saved Without VIN Sequence Number)

Comments

No comments entered.

Data Limitations

AIRBAG CONTROL MODULE (ACM) DATA LIMITATIONS:

General Information:

These limitations are intended to assist you in reading the event data that has been imaged from the vehicle's Airbag Control Module (ACM). They are not intended to provide specific information regarding the interpretation of this data. Event data should be examined in conjunction with other available physical evidence from the vehicle and scene.

Note: The ACM's current DTC status will be altered if the ACM is powered-up without the vehicle periphery connected. This situation might occur when the CDR tool is connected directly to the ACM (e.g. for bench top imaging). It will not affect the stored EDR data, but may result in additional DTCs within the ACM.

Note: During bench top imaging, make sure the ACM is not moved, tilted or turned over while connected to and powered by the CDR Interface Module. Also, after a CDR imaging process, wait one minute after power is removed from the ACM before attempting to move the module. Not following these general ACM guidelines for bench top imaging could cause new events to be recorded in the ACM.

Recorded Crash Events:

This ACM is capable of recording up to 6 deployment events of front, side, rear or rollover events within its memory. Each record contains 5 seconds of pre-crash data and at least 300ms of post-crash data. Deployment events are locked into memory and cannot be overwritten. Non-deployment events can be overwritten by subsequent deployment or non-deployment events. The oldest non-deployment event will be overwritten first. Some ACMs stop over-writing of older non-deployment events by more recent non-deployment events after a certain number of events (more than 1000). Under these conditions, the storage of deployment events is still available. The event counter is incremented for each event and stored within the data record.

Deployment events are recorded, when a non-reversible restraint system was commanded to deploy. Recording of non-deployment events requires a minimum delta-V of 8km/h within a 150ms period in either longitudinal or lateral direction. Reversible restraint systems (e.g. active headrests) that have been commanded to deploy also trigger recording of a non-deployment event. Time Zero of an event is determined by the ACM's algorithms based on the acceleration and/or pressure sensors or a deployment command. Post-crash data (e.g. deployment time of restraint systems) is reported relative to Time Zero.

The ACM supports recording of multiple events. In case of a rapid sequence of events (e.g. a combined frontal and side event), the ACM will record the data within a common EDR entry (a so-called parallel event). In this case, the post-crash data is reported relative to Time Zero of the initial event. If the initial event has already ended and another event happens within a time period of 5s from Time Zero of the initial event, the ACM will record a multi-event consisting of two or more separate EDR entries.

If power to the ACM was lost during an event, all or part of the event data record may not have been recorded.

Data:

The reported data elements may vary by vehicle model, model year or vehicle configuration. Part of the pre-crash data has been transmitted to the ACM by various vehicle control modules via the vehicle's communication network.

Time-continuous pre-crash data is recorded at two samples per second for 5 seconds before Time Zero. The main data elements are:

- Speed Vehicle Indicated: is reported as displayed by the vehicle's instrument cluster. The vehicle speed is evaluated as an average of wheel speeds and transmitted via the vehicle communication network to the ACM. Its data accuracy may be affected by various factors, such as significant changes in tire size from the factory settings, wheel lock-up or slip.
- Accelerator Pedal: is the ratio of the accelerator pedal's position compared to the fully depressed position (in percent). The pedal position sensor is wired to the Engine Control Module.
- Service Brake Activation: is the status of the brake pedal switch. The switch is wired to the Engine Control Module.
- Engine RPM (Combustion Engine): as reported by the Engine Control Module.
- Steering Input: as reported by the wheel angle sensor.
- ABS Activity: as reported by the Electronic Stability Control Module.
- Stability Control: as reported by the Electronic Stability Control Module. For this element the state "commanded off" is recorded if the stability control function was deactivated by the driver or if the sport modus was activated.

The pre-crash status is recorded 1 second before. The main data elements are:

- Safety Belt Status: as evaluated by the belt-switches that are wired to the ACM.
- Seat Track Position Switch: as evaluated by the seat track position sensors that are wired to the ACM.
- Airbag Warning Lamp, Status: as commanded by the ACM.
- Occupant Size Classification, Front Passenger: as reported by the occupant classification system.
- Frontal Airbag Disable Indicator Status: as commanded by the ACM.

Pre-crash and post-crash data are recorded asynchronously. The data element "Time from Last Speed Data Sample (Precrash) to Time Zero" indicates the time delay between the most recent pre-crash data sample and Time Zero (0 to 500ms).

Post-crash data is recorded after Time Zero up to 300ms. The Vehicle Roll Angle may be recorded for 5 seconds post-crash. The main data elements are:

- Event Type: indicates the event type depending on the algorithm that triggered the recording criteria first (deployment or Delta-V threshold).
- Multi-Event, Number of Events: determines the chronological order of records being part of a multi-event.
- Time from Previous / Initial Event to Current Event: indicates the time difference between records of multi-events.
- Delta-V Longitudinal / Lateral: are recorded every 10ms from Time Zero to 250ms. Delta-V reflects the change in velocity that the ACM experienced during the recorded time period. It does not necessarily correlate with vehicle traveling speed.
- Longitudinal / Lateral / Normal Acceleration: are recorded every 10ms from Time Zero to 250ms (if supported by the ACM). The reported range of acceleration may vary between ACM models. This ACM provides +/- 120g accelerometer range (longitudinal) and +/-120g accelerometer range (lateral).
- Clipping Time, Longitudinal / Lateral Acceleration Sensor: depending on the severity of the event, the measuring range of the longitudinal or lateral accelerometers may be exceeded. The data elements "Clipping Time, Longitudinal / Lateral Acceleration Sensor" indicate the time within an event when the measurement first exceeded the design range of the sensor. As a result, subsequent Delta-V values may be underestimated.
- Vehicle Roll Angle: is recorded every 100ms from 1 second before and up to 5 seconds after Time Zero. Due to mechanical limitations of the roll rate sensor, high accelerations, which can occur during front, side or rear crashes, can disturb the oscillating angular rate sensing element. This results in the roll rate data being temporarily invalid for a short period of time (at or shortly after Time Zero).
- Time to Deployment: indicates the time at which the ACM commanded the deployment of the associated restraint system.
- Time Maximum Delta-V: indicates the time at which the cummulativ change in velocity reaches its maximum. For this element it could be possible that the reported time does not correspond to the real time of the maximum delta-v. This discrepancy is caused by a wrong internal resolution and it is fixed from the software version 0170/0370.
- Disposal: indicates whether the ACM commanded the disposal of the propellant from the associated restraint system. "No Disposal" indicates that the restraint system was commanded to deploy for occupant restraint purposes.
- Date and Time at Event: is reported as the date and time of the vehicle's clock at the time of an event. Since the vehicle clock may be adjusted manually, the reported values may not reflect the actual date and time of given event. As with the other data elements reported herein, these parameters should be examined in conjunction with other available physical evidence from the vehicle and scene.
- Complete File Recorded: indicates if the event data has been completely recorded to the ACM's memory or if the recording process has been interrupted before completion.

The status "Data not Available" is reported if the ACM was unable to store the data element (e.g. due to missing communication). "Invalid Data" reported if the ACM was unable to store valid data for the data element (e.g. range exceeded, communication failure, sensor failure).

Data Sign Convention:

Data Element Name	Positive Sign Notation Indicates
Longitudinal Acceleration	Forward
Delta-V, Longitudinal	Forward
Maximum Delta-V, Longitudinal	Forward
Lateral Acceleration	Left to Right
Delta-V, Lateral	Left to Right
Maximum Delta-V, Lateral	Left to Right
Normal Acceleration	Downward
Vehicle Roll Angle	Left to Right Rotation
Steering Input	Rigth Turn

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.

14001_VWG4000AL_r003

System Status at Event (Record 1, Most Recent)

Event Counter at Event	1
Event Type	Rear
Multi-Event, Number of Events	1. Event
Time from Initial Event to Current Event (msec)	Data Not Available
Time from Previous Event to Current Event (msec)	Data Not Available
Vehicle Clock, Date and Time at Event (YYYY-MM-DD, HH:MM:SS)	
Vehicle Mileage (km)	3,190
Operating Time (min)	28,769
Ignition Cycle at Event (Cycles)	1,010
Ignition Cycle at Download (Cycles)	1,029
Maximum Delta-V, Longitudinal (MPH [km/h])	13.0 [21]
Time, Maximum Delta-V, Longitudinal (msec)	102.5
Clipping Time, Longitudinal Acceleration Sensor (msec)	Clipping Not Reached
Maximum Delta-V, Lateral (MPH [km/h])	1.9 [3]
Time, Maximum Delta-V, Lateral (msec)	85.0
Clipping Time, Lateral Acceleration Sensor (msec)	Clipping Not Reached
Time, Maximum Delta-V, Resultant (msec)	102.5
Time from Last Speed Data Sample (Precrash) to Time Zero (msec)	14
Time from Time Zero to Algorithm Start (Front) (msec)	Algorithm Not Started
Time from Time Zero to Algorithm Start (Side) (msec)	Algorithm Not Started
Time from Time Zero to Algorithm Start (Rear) (msec)	Algorithm Started at Time Zero
Time from Time Zero to Deployment (Rollover) (msec)	Algorithm not Deployed
Time from Time Zero to Algorithm Reset (Front) (msec)	Algorithm Not Reset
Time from Time Zero to Algorithm Reset (Side) (msec)	Algorithm Not Reset
Time from Time Zero to Algorithm Reset (Rear) (msec)	120
Time from Time Zero to Algorithm Reset (Rollover) (msec)	Algorithm Not Reset
Vehicle Identification Number (VIN)	WVGUNPE25NP*****
FAZIT Identification String	8AY-AL112.04.2200030095
Part Number, ACM	1EA959655DS
Software Version, ACM	0375
Serial Number ECU	W100NyE0F63
Production Date, ACM	0C0416
Part Number, ACM Software	V03935356GY
Supplier ID, ACM	8AY
Supply Voltage (Before Event) (V)	13.9
Complete File Recorded	Completed Successfully

Deployment Command Data (Record 1, Most Recent)

Pretensioner, Time to 1st Stage Deployment, Driver (msec)	78
Belt-Load Limiter, Time to Deployment, Driver (msec)	Not Deployed
Sill-End Pretensioner, Time to Deployment, Driver (msec)	78
Frontal Airbag, Time to 1st Stage Deployment, Driver (msec)	Not Deployed
Side Airbag, Time to 1st Stage Deployment, Driver (msec)	Not Deployed
Side Curtain/Tube Airbag, Time to Deployment, Driver Side (msec)	Not Deployed
Pretensioner, Time to 1st Stage Deployment, Front Passenger (msec)	78
Belt-Load Limiter, Time to Deployment, Front Passenger (msec)	Not Deployed
Sill-End Pretensioner, Time to Deployment, Front Passenger (msec)	78
Frontal Airbag, Time to 1st Stage Deployment, Front Passenger (msec)	Not Deployed
Frontal Airbag, Time to 2nd Stage Deployment, Front Passenger (msec)	Not Deployed
Frontal Airbag, 2nd Stage Disposal, Front Passenger	Not Deployed
Side Airbag, Time to 1st Stage Deployment, Front Passenger (msec)	Not Deployed
Side Curtain/Tube Airbag, Time to Deployment, Passenger Side (msec)	Not Deployed
Pretensioner, Time to 1st Stage Deployment, 2nd Row, Driver Side (msec)	78
Pretensioner, Time to 1st Stage Deployment, 2nd Row, Passenger Side (msec)	78
High-Voltage Battery Deactivation, Time to Deployment (msec)	77

Pre-Crash Data -1 Sec (Record 1, Most Recent)

Safety Belt Status, Driver	Belted
Seat Track Position Switch Status, Driver	Not Foremost
Occupant Size Classification, Driver	Data Not Available
Safety Belt Status, Front Passenger	Not Belted
Seat Track Position Switch Status, Front Passenger	Not Foremost
Occupant Size Classification, Front Passenger	Empty/Child
Frontal Airbag Disable Indicator Status, Passenger	On
Airbag Warning Lamp, Status	Off
Frontal Airbag Suppression Switch Status, Front Passenger	Data Not Available

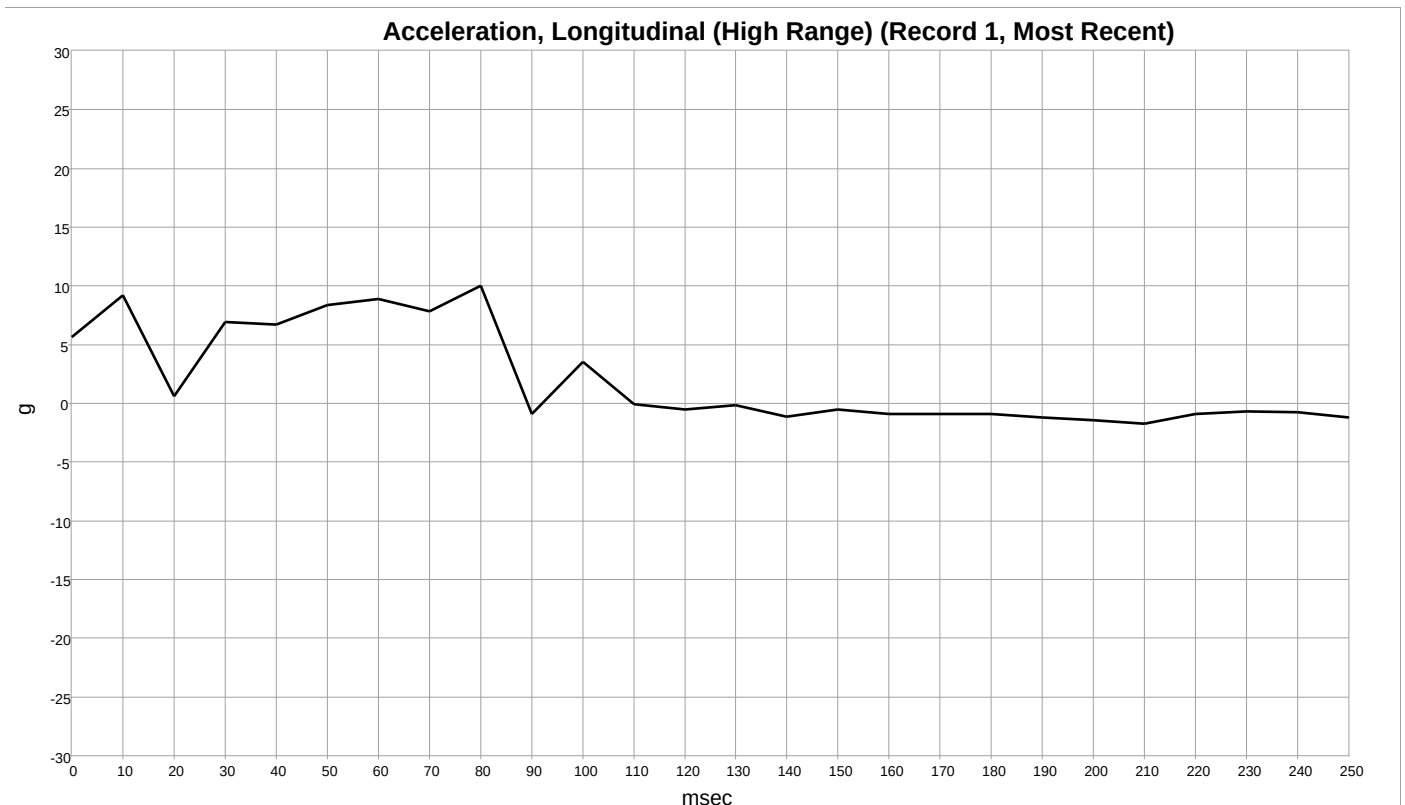
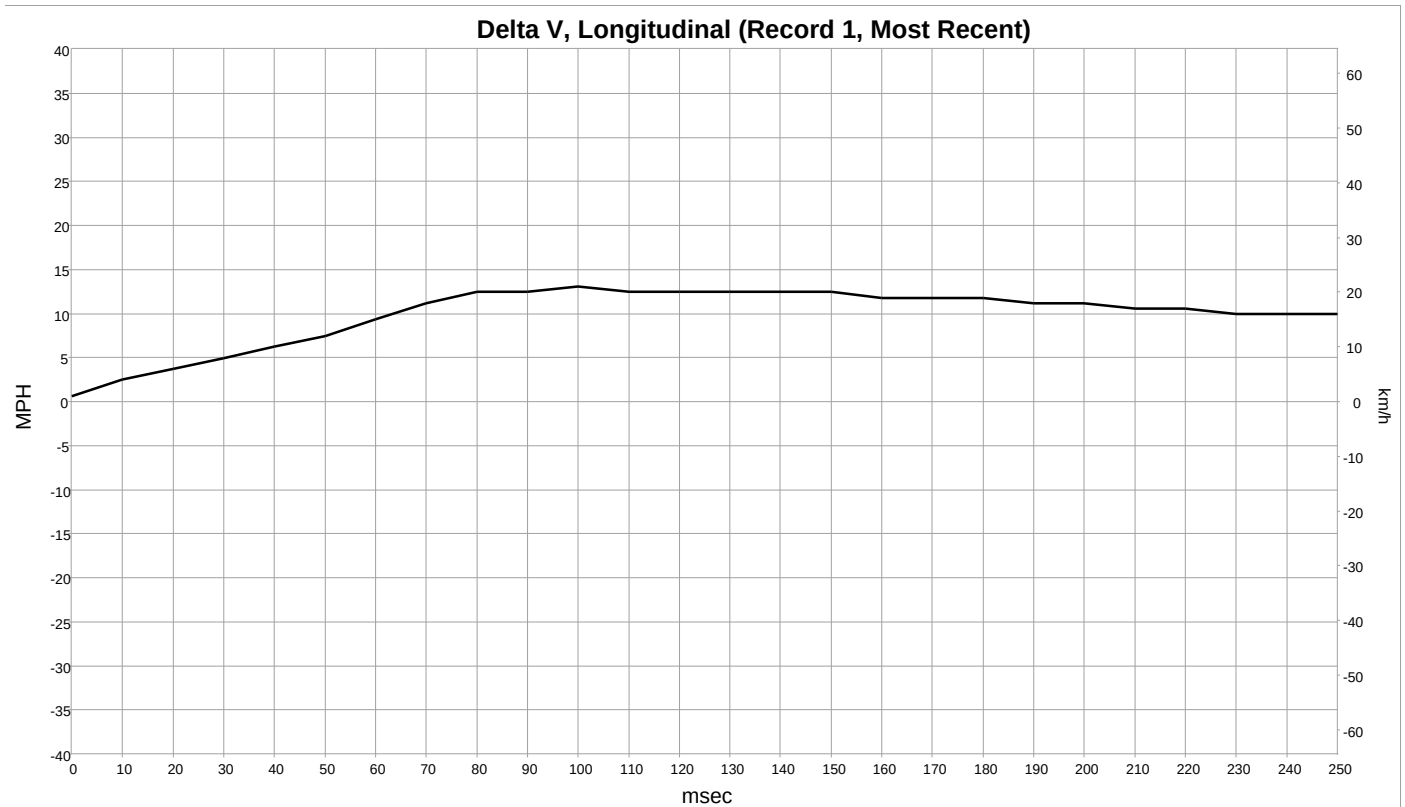
Pre-Crash Data -5 to 0 sec (Record 1, Most Recent) - Table 1 of 2

Time (sec)	Engine RPM (Combustion Engine) (RPM)	ABS Activity	Stability Control	Steering Input (deg)	Speed, Vehicle Indicated (MPH [km/h])	Accelerator Pedal (%)	Service Brake Activation	Engine RPM, Electrical Engine 1 (RPM)
-5.0	Data Not Available	No ABS Activity	No ESC Activity	0	10 [16]	0	On (Driver)	1,472
-4.5	Data Not Available	No ABS Activity	No ESC Activity	-2	7 [11]	0	On (Driver)	960
-4.0	Data Not Available	No ABS Activity	No ESC Activity	0	4 [7]	0	On (Driver)	640
-3.5	Data Not Available	No ABS Activity	No ESC Activity	8	2 [4]	0	On (Driver)	320
-3.0	Data Not Available	No ABS Activity	No ESC Activity	4	1 [2]	0	On (Driver)	256
-2.5	Data Not Available	No ABS Activity	No ESC Activity	4	0 [0]	0	On (Driver)	64
-2.0	Data Not Available	No ABS Activity	No ESC Activity	4	0 [0]	0	On (Driver)	0
-1.5	Data Not Available	No ABS Activity	No ESC Activity	4	0 [0]	0	On (Driver)	0
-1.0	Data Not Available	No ABS Activity	No ESC Activity	4	0 [0]	0	On (Driver)	0
-0.5	Data Not Available	No ABS Activity	No ESC Activity	4	0 [0]	0	On (Driver)	0
0.0	Data Not Available	No ABS Activity	No ESC Activity	4	0 [0]	0	On (Driver)	0

Pre-Crash Data -5 to 0 sec (Record 1, Most Recent) - Table 2 of 2

Time (sec)	Engine RPM, Electrical Engine 2 (RPM)	Qualifyier Stability Control Function
-5.0	1,280	ESP System no Failure
-4.5	832	ESP System no Failure
-4.0	512	ESP System no Failure
-3.5	320	ESP System no Failure
-3.0	192	ESP System no Failure
-2.5	64	ESP System no Failure
-2.0	0	ESP System no Failure
-1.5	0	ESP System no Failure
-1.0	0	ESP System no Failure
-0.5	0	ESP System no Failure
0.0	0	ESP System no Failure

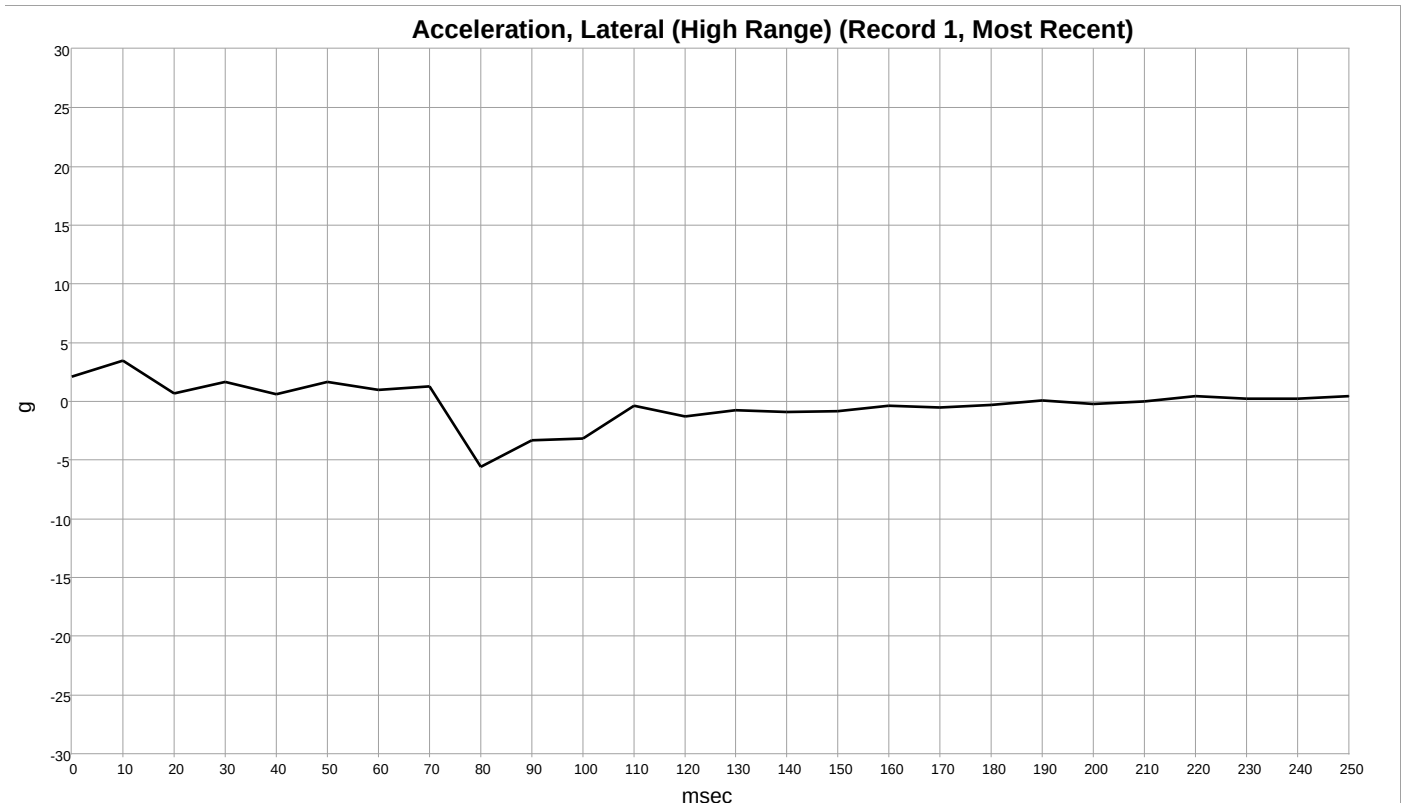
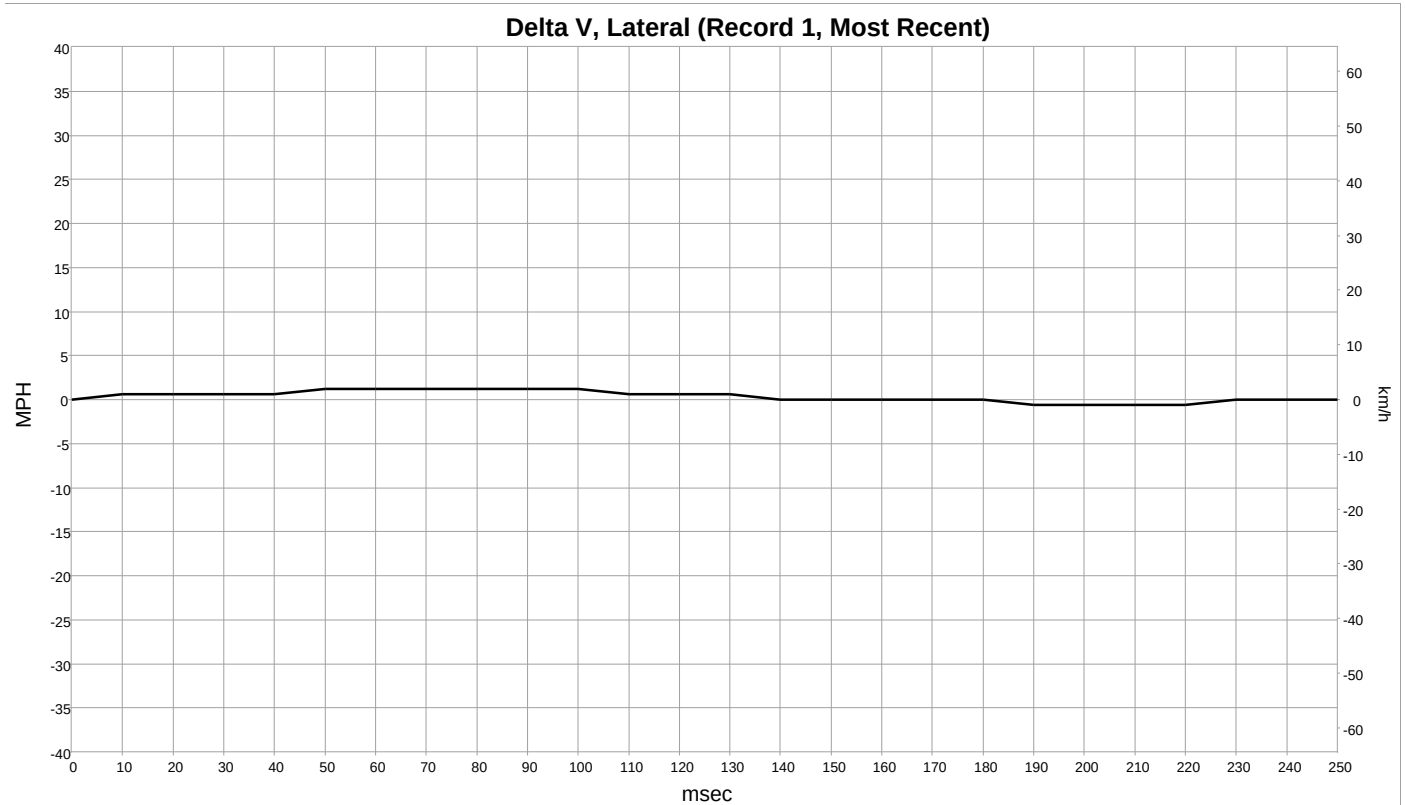
Longitudinal Crash Pulse (Record 1, Most Recent)



Longitudinal Crash Pulse (Record 1, Most Recent)

Time (msec)	Delta-V, Longitudinal (MPH [km/h])	Longitudinal Acceleration High Range (g)
0	0.6 [1]	5.69
10	2.5 [4]	9.19
20	3.7 [6]	0.63
30	5.0 [8]	6.94
40	6.2 [10]	6.69
50	7.5 [12]	8.38
60	9.3 [15]	8.88
70	11.2 [18]	7.81
80	12.4 [20]	10.06
90	12.4 [20]	-0.88
100	13.0 [21]	3.56
110	12.4 [20]	-0.06
120	12.4 [20]	-0.56
130	12.4 [20]	-0.13
140	12.4 [20]	-1.13
150	12.4 [20]	-0.56
160	11.8 [19]	-0.94
170	11.8 [19]	-0.94
180	11.8 [19]	-0.88
190	11.2 [18]	-1.19
200	11.2 [18]	-1.44
210	10.6 [17]	-1.75
220	10.6 [17]	-0.94
230	9.9 [16]	-0.69
240	9.9 [16]	-0.75
250	9.9 [16]	-1.19

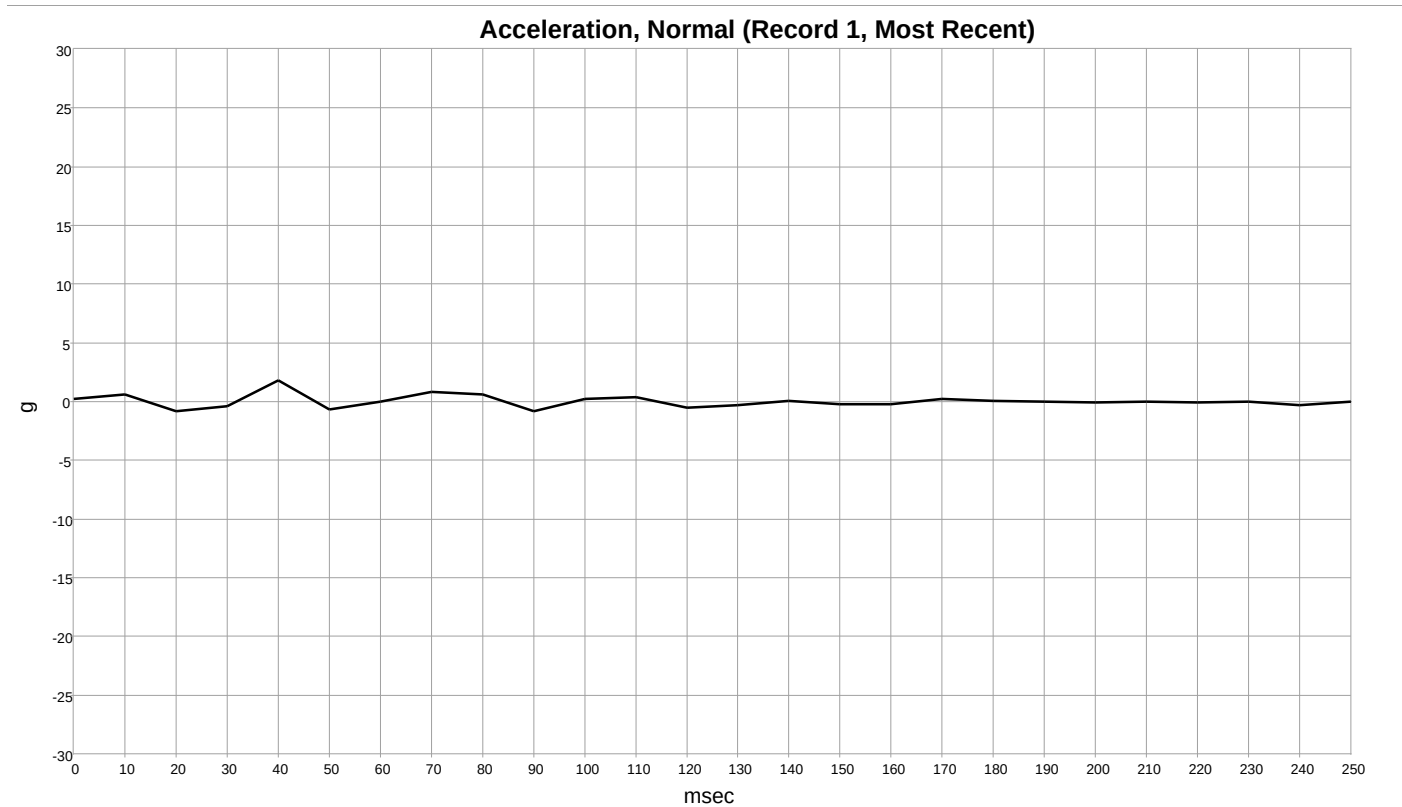
Lateral Crash Pulse (Record 1, Most Recent)



Lateral Crash Pulse (Record 1, Most Recent)

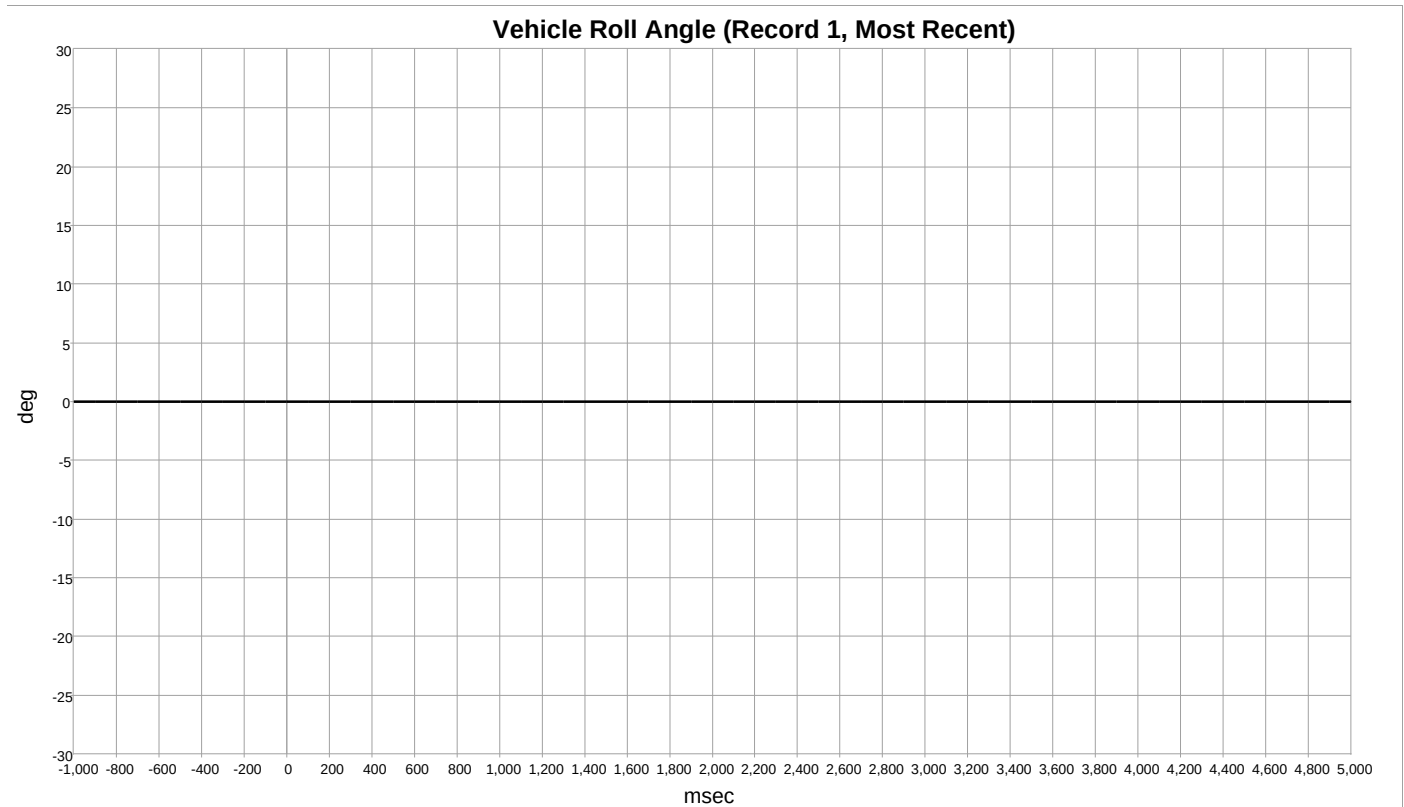
Time (msec)	Delta-V, Lateral (MPH [km/h])	Lateral Acceleration High Range (g)
0	0.0 [0]	2.13
10	0.6 [1]	3.44
20	0.6 [1]	0.69
30	0.6 [1]	1.69
40	0.6 [1]	0.63
50	1.2 [2]	1.63
60	1.2 [2]	1.00
70	1.2 [2]	1.31
80	1.2 [2]	-5.56
90	1.2 [2]	-3.31
100	1.2 [2]	-3.13
110	0.6 [1]	-0.38
120	0.6 [1]	-1.31
130	0.6 [1]	-0.75
140	0.0 [0]	-0.88
150	0.0 [0]	-0.81
160	0.0 [0]	-0.38
170	0.0 [0]	-0.56
180	0.0 [0]	-0.31
190	-0.6 [-1]	0.06
200	-0.6 [-1]	-0.19
210	-0.6 [-1]	0.00
220	-0.6 [-1]	0.44
230	0.0 [0]	0.25
240	0.0 [0]	0.25
250	0.0 [0]	0.44

Normal Acceleration (Record 1, Most Recent)



Time (msec)	Normal Acceleration (g)
0	0.2
10	0.6
20	-0.8
30	-0.4
40	1.8
50	-0.7
60	0.0
70	0.8
80	0.6
90	-0.8
100	0.2
110	0.4
120	-0.5
130	-0.3
140	0.1
150	-0.2
160	-0.2
170	0.2
180	0.1
190	0.0
200	-0.1
210	0.0
220	-0.1
230	0.0
240	-0.3
250	0.0

Vehicle Roll Angle (Record 1, Most Recent)



Time (msec)	Vehicle Roll Angle (deg)
-1000	0
-900	0
-800	0
-700	0
-600	0
-500	0
-400	0
-300	0
-200	0
-100	0
0	0
100	0
200	0
300	0
400	0
500	0
600	0
700	0
800	0
900	0
1000	0
1100	0
1200	0
1300	0
1400	0
1500	0
1600	0

Time (msec)	Vehicle Roll Angle (deg)
1700	0
1800	0
1900	0
2000	0
2100	0
2200	0
2300	0
2400	0
2500	0
2600	0
2700	0
2800	0
2900	0
3000	0
3100	0
3200	0
3300	0
3400	0
3500	0
3600	0
3700	0
3800	0
3900	0
4000	0
4100	0
4200	0
4300	0
4400	0
4500	0
4600	0
4700	0
4800	0
4900	0
5000	0

DOT HS 813 741
November 2025



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

