

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	
User	
Case Number	
EDR Data Imaging Date	
Crash Date	
Filename	
Saved on	
Imaged with CDR version	
Imaged with Software Licensed to (Company Name)	collisiondata
Reported with CDR version	Crash Data Retrieval Tool 21.5.1
Reported with Software Licensed to (Company Name)	collisiondata
EDR Device Type	Airbag Control Module
ACM Adapter Detected During Download	Yes
Event(s) recovered	locked frontal event Fuel cutoff level 1

Comments

Example EDR Report from a 2018 Ford Explorer

www.collisiondata.com / assignments@collisiondata.com

Faults Present at Start of Event

Longitudinal and Lateral Delta-V

Pre-Crash Data (-1 Second)

Ignition cycle, crash
 Frontal air bag warning lamp, on/off
 Occupant size classification, front passenger (Child size Yes/No [Hex value])
 Safety belt status, driver
 Seat track position switch, foremost, status, driver
 Seat track position switch, foremost, status, front passenger
 Safety belt status, front passenger
 Brake Telltale
 ABS Telltale
 ESC/TC Telltale
 ESC/TC Off Telltale
 Speed Control Telltale
 Powertrain Wrench Telltale
 Powertrain Malfunction Indicator Lamp (MIL) Telltale

Pre-Crash Data (-5 Seconds to 0, 2 samples/sec)

Speed, vehicle indicated MPH
 "Accelerator pedal, % full"
 Service brake, on/off
 Engine RPM
 ABS activity (engaged, non-engaged)
 Brake Powertrain Torque Request (Yes, No)
 Traction Control via Brakes (engaged, non-engaged)
 Engine Torque (N-m)
 Driver Gear Select (Auto Trans)

Pre-Crash Data (-5 Seconds to 0, 10 samples/sec)

Stability Control Lateral Acceleration (g)
 Stability Control Longitudinal Acceleration (g)
 Stability Control Yaw Rate (deg/sec)

System Status at Time of Retrieval

VIN as programmed into RCM at factory

Current VIN from PCM
Ignition cycle, download (first record)
Ignition cycle, download (second record)
Restraints Control Module Part and Serial Numbers
Restraints Control Module Software Part Number (Version)
Restraints Control Sensor Serial Numbers

System Status at Event
Complete file recorded (yes,no)
Multi-event, number of events
Time from event 1 to 2 (msec)
Lifetime Operating Timer at event time zero (seconds)
Key-on Timer at event time zero (seconds)
Vehicle voltage at time zero (Volts)
Energy Reserve Mode entered during event (Y/N)
Parameters reporting time RCM and satellite sensors lost relative to time zero (if applicable)

Deployment Data
Supported airbag and associated stage deployment times in (msec)
Supported pretensioner deployment times in (msec)
Maximum delta-V, longitudinal (MPH[km/h])
Time, maximum delta-V longitudinal (msec)
Maximum delta-V, lateral (MPH[km/h])
Time, maximum delta-V lateral (msec)
Supported parameters reporting satellite sensors discriminating deployment (if applicable)
Supported parameters reporting satellite sensors safing or confirming deployment (if applicable)

The retrieval of this data has been authorized by the vehicle's owner, or other legal authority such as a court order or search warrant, as indicated by the CDR tool user on Monday, April 15 2019 at 10:42:40.

Data Limitations

Data Imaging:

CAUTION: When imaging data directly from the RCM on a bench top, make sure the RCM is placed on a flat surface without any movement (static) while connected to and powered by the CDR interface. Not following the above guideline for bench top imaging could risk inducing new events to be recorded in the RCM and possibly overwriting a Non airbag deployment.

Note that the RCM Adapter Detected during Download parameter equal to "Yes" indicates that the EDR data was collected directly from the RCM. When equal to "No", it indicates that the EDR data was collected through the OBD II from the vehicle.

Restraints Control Module (RCM) Recorded Crash Event(s):

The RCM can store up to two crash events. Event types are categorized as follow:

1. Non deployment trigger event is an event in which EDR recording trigger threshold is met or exceeded (minimum of 5 mph (8kph) Accumulated Delta Velocity within 150ms interval), but no device(s) have deployed. The data from such event can be overwritten by subsequent events.
2. Airbag deployment event is an event in which frontal, side or curtain airbags have deployed. Note that such event cannot be overwritten or cleared from the Restraints Control Module (RCM). Once the RCM has deployed any airbag device(s), the RCM must be replaced.
3. Some RCM may also categorize Non airbag deployment event. This type is an event in which non airbag devices such as pretensioners, knee bolster etc... have deployed. Note that such event can be overwritten given a subsequent "deployment" event.

"Time zero" or Event Beginning of any event (First Record or Second Record) is defined as the first Algorithm wake up during that event. So all the Pre-Crash, At Event, Delta V Data, deployment times etc... are relative to "Time zero".

It is possible that conditions in a crash may result in an incomplete event data record.

EDR Data Elements Overview/Interpretation in CDR Report:

Under CDR File Information Section

- Event(s) recovered indicates if an event was detected and recorded by RCM. If no event is detected, it will indicate "none". If a trigger or non-airbag deployment event is detected, it will indicate "unlocked event". If an airbag deployment is detected, it will indicate "locked frontal event", or "locked side event", or "locked rollover event".

Under System Status at Event Section

- Complete file recorded indicates if data from the recorded event has been fully written to the RCM memory.
- If the RCM detected a peripheral crash sensor was lost during an event, the crash sensor would be identified as well as the time it was lost during that event relative to Time zero. If no loss of a peripheral crash sensor, nothing would be displayed. Note in some vehicles, loss of a peripheral crash sensor may lead to the loss of another peripheral crash sensor due to shared communication.

Under Deployment Data Section

- If the RCM commanded a deployment during an event, the deployment device(s) would be identified as well as the time the RCM commanded its deployment relative to Time zero. If no device was commanded to deploy by the RCM, nothing (no deployment device(s)) would be displayed.

Under Pre-Crash Data -5 to 0 sec

- Steering Wheel Angle if Applicable: positive value indicates left turn, and negative value would indicate right turn.
- Stability Control Lateral Acceleration if Applicable: Lateral Acceleration (Y-direction) is the acceleration along the lateral axis of the vehicle, reported as positive when accelerating to the left.
- Stability Control Longitudinal Acceleration if Applicable: Longitudinal Acceleration (X-direction) is the acceleration along the longitudinal axis of the vehicle, reported as positive when accelerating in a forward direction.
- Stability Control Yaw Rate if Applicable: The Yaw Axis is the vertical axis of the vehicle, generally perpendicular to the plane of the road. A positive Yaw Rate is counter-clockwise when observing the vehicle from above.
- Stability Control Roll Rate if Applicable: The Roll Axis is the longitudinal axis of the vehicle, generally aligned with the primary axis of motion of the vehicle. A positive Roll Rate is counter-clockwise when observing the vehicle from the front.

Under Longitudinal Crash Pulse

- Delta-V, longitudinal: SAE J211 sign convention, negative value generally indicates a front crash and positive value generally indicates a rear crash. Longitudinal delta-V reflects the change in forward velocity that the sensing system experienced from Time zero. It is not the speed the vehicle was traveling before the event. Note that the vehicle speed is recorded separately. This data should be examined in conjunction with other available physical evidence from the vehicle and scene when assessing occupant or vehicle longitudinal delta-V.

Under Lateral Crash Pulse

- Delta-V, lateral: SAE J211 sign convention, Positive value generally indicates a driver side crash and negative value generally indicates a passenger side crash.

Under Rollover Sensor Data (if Applicable)

- Vehicle roll angle if applicable: The Roll Axis is the longitudinal axis of the vehicle, generally aligned with the primary axis of motion of the vehicle. A positive Roll Angle is counter-clockwise when observing the vehicle from the front.

Data Sources:

The Restraints Control Module (RCM) contains all recorded data on any event. Data collected from the RCM comes from multiple sources:

1. Internal to the RCM such as internal sensors for delta Velocity data, rollover angle data if applicable, etc... which are measured, calculated and stored internally.
2. External to the RCM but with a direct connection such as buckle switches, peripheral crash sensors, seat track switch(s) etc... which are measured, calculated and stored internally.
3. External Modules to the RCM such as Powertrain Control Module, Brake Control Module, etc... These modules communicate to the RCM via Vehicle Communication Network. The RCM stores the received data internally.

02013_RCM-RC7P_r001

System Status at Time of Retrieval

VIN As Programmed into RCM at Factory	
Current VIN (From PCM)	
Ignition Cycle, Download (First Record)	2,153
Ignition Cycle, Download (Second Record)	N/A
Restraints Control Module Part Number	HB5T-14B321-AA
Restraints Control Module Serial Number	3502394337530000
Restraints Control Module Software Part Number (Version)	GR3T-14C028-AA
Driver Side/Center Frontal Restraints Sensor Serial Number	00202AE7
Driver, Row 1, Side Restraint Sensor 1 Serial Number	00000054
Driver, Row 2, Side Restraint Sensor 2 Serial Number	00062AE4
Passenger Frontal Restraints Sensor Serial Number	00202AE7
Passenger, Row 1, Side Restraint Sensor 1 Serial Number	0000001F
Passenger, Row 2, Side Restraint Sensor 2 Serial Number	00302AE9
Steering Wheel Location	Left Hand Drive

System Status at Event (First Record)

Complete File Recorded (Yes,No)	Yes
Multi-Event, Number of Events	1
Time From Event 1 to 2 (msec)	0
Lifetime Operating Timer at Event Time Zero (sec)	2,886,365
Key-On Timer at Event Time Zero (sec)	595
Vehicle Voltage at Time Zero (V)	14.4
Energy Reserve Mode Entered During Event (Yes, No)	No

Faults Present at Start of Event (First Record)

No Faults Recorded

Deployment Data (First Record)

Frontal Airbag Deployment, Time to First Stage Deployment, Driver (msec)	26.0
Pretensioner (Retractor) Deployment, Time to Fire, Driver (msec)	26.0
Frontal Airbag Deployment, Time to 2nd Stage, Driver (msec)	37.0
Side Airbag Deployment, Time to Deploy, Driver (msec)	34.0
Side Airbag/Curtain Airbag Deployment, Time to Deploy, Driver Side (msec)	34.0
Pretensioner (Anchor) Deployment, Time to Fire, Driver (msec)	31.0
Adaptive Steering Column Deployment, Time to Deploy, Driver (msec)	26.0
Maximum Delta-V, Longitudinal (MPH [km/h])	-20.01 [-32.21]
Time, Maximum Delta-V Longitudinal (msec)	300.0
Driver or center, front satellite sensor, Discriminating Deployment	Yes
Driver or center, front satellite sensor, Safing Deployment	Yes
Passenger, front satellite sensor, Discriminating Deployment	Yes
Passenger, front satellite sensor, Safing Deployment	Yes
RCM front(longitudinal), Discriminating Deployment	Yes
RCM front(longitudinal), Safing Deployment	Yes

Pre-Crash Data -1 sec (First Record)

Ignition cycle, Crash	2,149
Frontal Air Bag Warning Lamp, On/Off	Off
Safety Belt Status, Driver	Buckled
Seat Track Position Switch, Foremost, Status, Driver	Not Forward
Seat Track Position Switch, Foremost, Status, Front Passenger	Not Forward
Safety Belt Status, Front Passenger	Unbuckled
Brake Telltale	Off
ABS Telltale	Off
ESC/TC Telltale	Off
ESC/TC Off Telltale	Default Mode
Powertrain Wrench Telltale	Off
Powertrain Malfunction Indicator Lamp (MIL) Telltale	Fresh Off

Pre-Crash Data -5 to 0 sec [2 samples/sec] (First Record) - Table 1 of 2

Time (sec)	Speed, Vehicle Indicated (MPH [km/h])	Speed, Vehicle Indicated, Quality Factor	Accelerator Pedal, % Full	Accelerator Pedal, % Full, Quality Factor	Service Brake, On/Off	Service brake, Quality Factor	Engine RPM	ABS Activity (Engaged, Non-Engaged)
- 5.0	45.9 [74]	OK	20.3	OK	Off	OK	2,400	Non-engaged
- 4.5	46.3 [74]	OK	20.3	OK	Off	OK	1,836	Non-engaged
- 4.0	46.7 [75]	OK	20.3	OK	Off	OK	1,858	Non-engaged
- 3.5	47.1 [76]	OK	16.9	OK	Off	OK	1,844	Non-engaged
- 3.0	47.3 [76]	OK	21.9	OK	Off	OK	1,970	Non-engaged
- 2.5	48.0 [77]	OK	26.1	OK	Off	OK	1,942	Non-engaged
- 2.0	48.7 [78]	OK	26.1	OK	Off	OK	1,922	Non-engaged
- 1.5	49.1 [79]	OK	26.1	OK	Off	OK	1,942	Non-engaged
- 1.0	49.7 [80]	OK	27.0	OK	Off	OK	1,980	Non-engaged
- 0.5	50.0 [80]	OK	0.0	OK	On	OK	2,016	Non-engaged
0.0	42.9 [69]	OK	0.0	OK	On	OK	1,554	Non-engaged

Pre-Crash Data -5 to 0 sec [2 samples/sec] (First Record) - Table 2 of 2

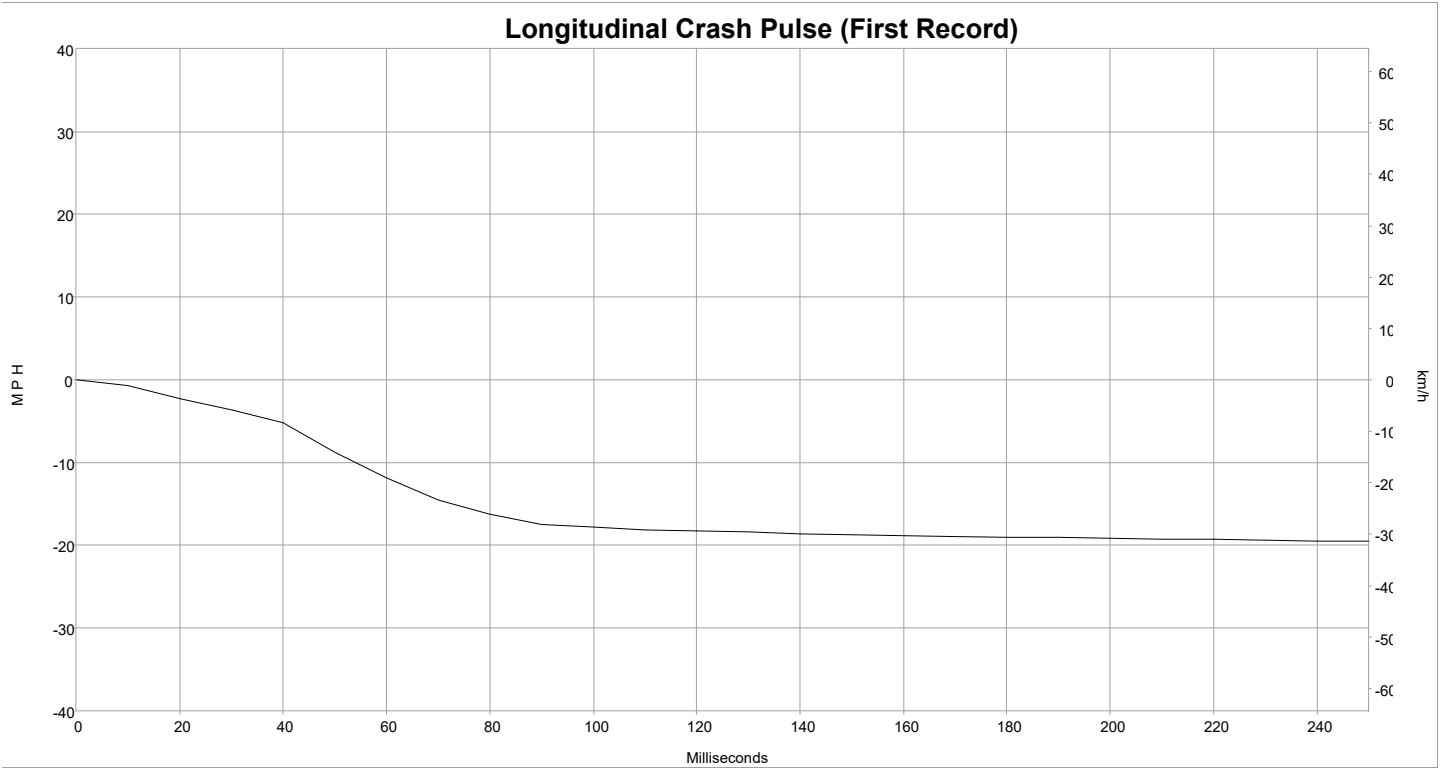
Time (sec)	Brake Powertrain Torque Request 1	Brake Powertrain Torque Request 2	Traction Control via Brakes	Wheel Torque (N-m)	Speed Control Status	Driver Gear Selection (Auto Trans)	Occupant Size Classification, Front Passenger (Child size Yes/No [Hex value])
- 5.0	No	No	No	412	Off	Drive	No [\$01]
- 4.5	No	No	No	476	Off	Drive	No [\$01]
- 4.0	No	No	No	484	Off	Drive	No [\$01]
- 3.5	No	No	No	396	Off	Drive	No [\$01]
- 3.0	No	No	No	492	Off	Drive	No [\$01]
- 2.5	No	No	No	648	Off	Drive	No [\$01]
- 2.0	No	No	No	660	Off	Drive	No [\$01]
- 1.5	No	No	No	664	Off	Drive	No [\$01]
- 1.0	No	No	No	656	Off	Drive	No [\$01]
- 0.5	No	No	No	320	Off	Drive	No [\$01]
0.0	No	No	No	-188	Off	Drive	No [\$01]

Pre-Crash Data -5 to 0 sec [10 samples/sec] (First Record)

Time (sec)	Stability Control Lateral Acceleration (g)	Stability Control Longitudinal Acceleration (g)	Stability Control Yaw Rate (deg/sec)	Stability Control Roll Rate (deg/sec)	Steering Wheel Angle (deg)
- 5.0	-0.02	0.04	-0.72	-1.11	-4.2
- 4.9	0.00	0.05	-0.54	-1.16	-2.9
- 4.8	-0.02	0.04	-0.08	-0.07	-2.2
- 4.7	-0.03	0.04	0.10	-0.23	-2.1
- 4.6	0.00	0.05	0.01	0.31	-2.2
- 4.5	0.00	0.03	-0.10	-0.07	-2.2
- 4.4	-0.01	0.03	-0.06	-0.95	-2.4
- 4.3	-0.01	0.04	-0.19	-1.27	-3.2
- 4.2	-0.02	0.03	-0.61	-1.35	-2.5
- 4.1	-0.03	0.04	-0.38	-0.60	-1.5
- 4.0	-0.01	0.05	-0.36	-0.47	-1.3
- 3.9	-0.01	0.03	-0.29	0.15	-1.1
- 3.8	-0.02	0.03	-0.22	1.48	-0.8
- 3.7	-0.02	0.04	-0.13	1.08	-0.7
- 3.6	-0.02	0.03	-0.13	1.48	0.0
- 3.5	-0.01	0.01	-0.10	2.51	0.3
- 3.4	0.00	0.02	-0.06	2.20	0.4
- 3.3	0.00	0.02	-0.08	1.75	0.4
- 3.2	0.01	0.02	-0.15	1.19	0.1
- 3.1	0.01	0.02	-0.15	-0.28	0.1
- 3.0	-0.01	0.04	-0.31	-0.03	0.0
- 2.9	0.01	0.05	-0.19	-0.55	0.0
- 2.8	-0.01	0.05	-0.42	0.31	0.0
- 2.7	-0.04	0.06	-0.26	0.71	0.0
- 2.6	0.00	0.07	-0.01	0.36	0.0
- 2.5	0.01	0.07	-0.13	-0.03	0.0
- 2.4	0.00	0.06	-0.26	-1.00	0.0
- 2.3	0.01	0.06	-0.22	-1.35	0.0
- 2.2	0.00	0.04	-0.19	-0.60	0.0
- 2.1	-0.01	0.07	-0.03	-0.63	0.0
- 2.0	-0.01	0.06	0.10	0.11	0.2
- 1.9	0.00	0.06	0.01	0.95	0.3
- 1.8	0.00	0.06	0.10	1.32	0.4
- 1.7	0.01	0.05	0.08	0.44	0.2
- 1.6	0.02	0.06	-0.06	0.31	0.2
- 1.5	0.00	0.06	-0.10	-0.44	0.2
- 1.4	0.01	0.05	-0.08	-0.11	0.3
- 1.3	0.01	0.05	0.03	-0.23	0.0
- 1.2	0.00	0.05	-0.03	0.11	0.0
- 1.1	-0.01	0.05	0.01	-0.03	0.0
- 1.0	-0.02	0.07	-0.26	-1.08	-1.9
- 0.9	-0.08	0.07	-1.32	-2.56	-6.8
- 0.8	-0.12	0.08	-2.92	-3.71	-13.5
- 0.7	-0.20	0.08	-4.72	-2.91	-18.2
- 0.6	-0.21	0.04	-4.63	-1.27	-13.5
- 0.5	-0.07	-0.44	-2.27	1.00	-6.0
- 0.4	-0.16	-0.59	-1.42	1.80	-10.5
- 0.3	-0.20	-0.69	-4.05	-2.07	-21.7
- 0.2	-0.22	-0.67	-7.47	-3.95	-26.9
- 0.1	-0.14	-0.76	-6.82	0.92	-11.5
0.0	0.00	-0.75	-3.68	3.79	7.4

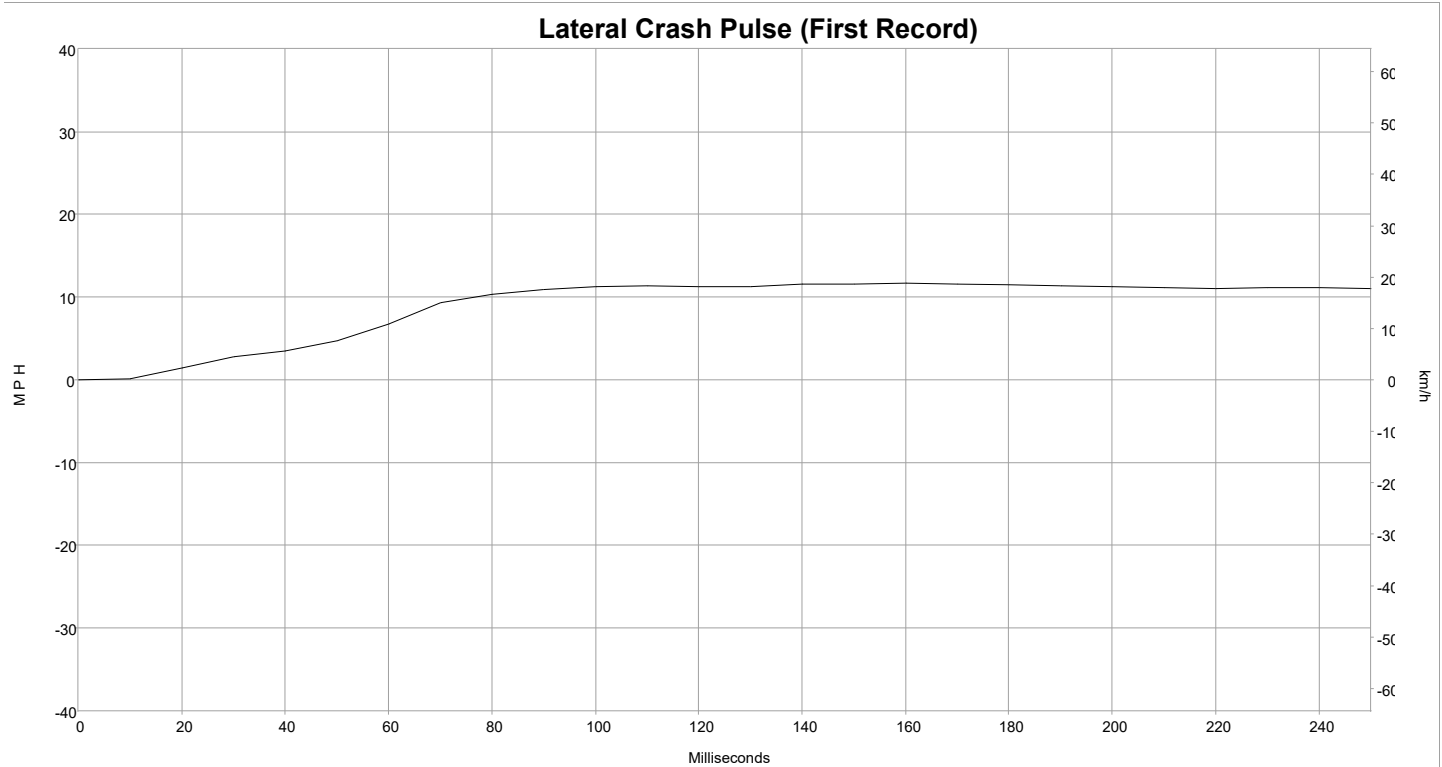
Post-Crash Data 0 to 5 sec [4 samples/sec] (First Record)

Time (sec)	Impact Event Feedback Status
0.00	EventInProgress
0.25	EventInProgress
0.50	EventInProgress
0.75	EventInProgress
1.00	EventInProgress
1.25	EventInProgress
1.50	EventInProgress
1.75	EventInProgress
2.00	EventInProgress
2.25	EventInProgress
2.50	EventInProgress
2.75	EventInProgress
3.00	EventInProgress
3.25	EventInProgress
3.50	EventInProgress
3.75	EventInProgress
4.00	EventInProgress
4.25	EventInProgress
4.50	EventInProgress
4.75	EventInProgress
5.00	EventInProgress



Longitudinal Crash Pulse (First Record)

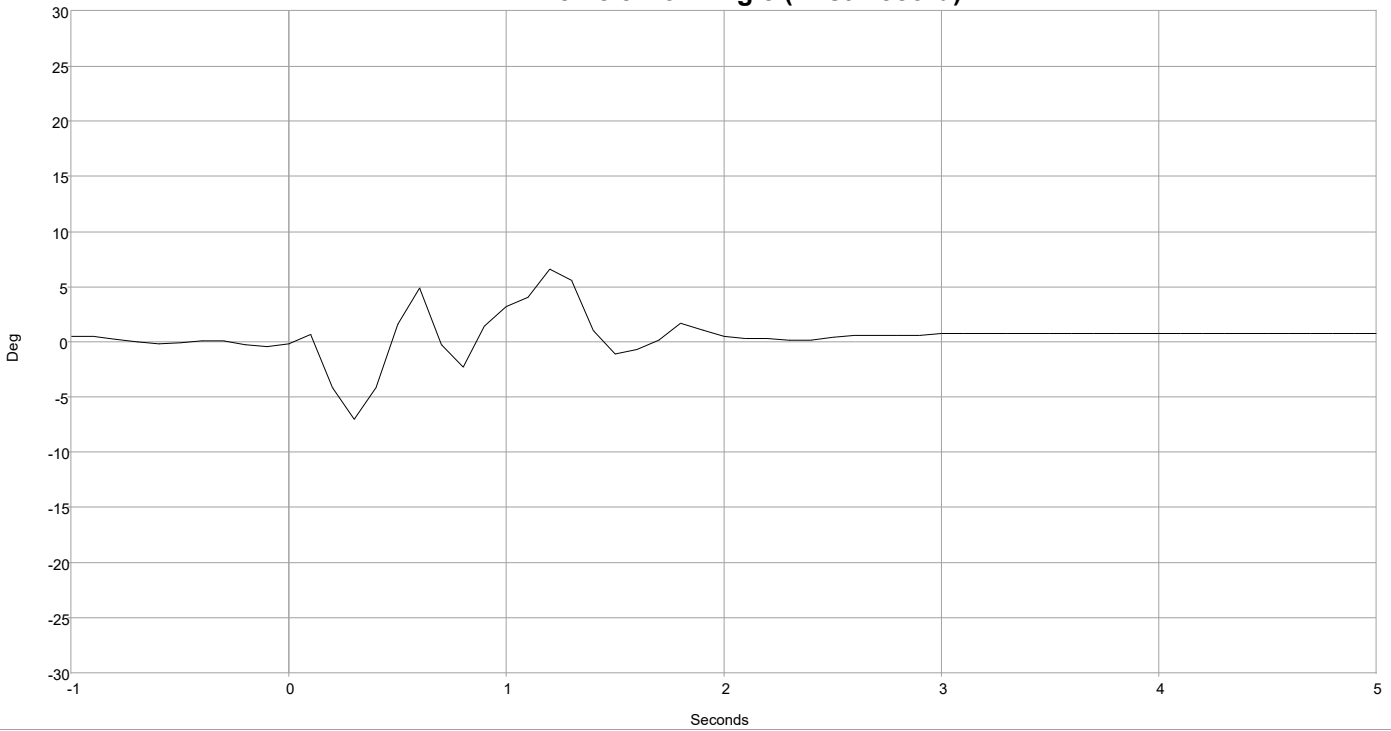
Time (msec)	Delta-V, longitudinal (MPH)	Delta-V, longitudinal (km/h)
0	-0.05	-0.08
10	-0.63	-1.01
20	-2.29	-3.69
30	-3.56	-5.73
40	-5.18	-8.33
50	-8.79	-14.14
60	-11.79	-18.98
70	-14.56	-23.44
80	-16.26	-26.17
90	-17.42	-28.03
100	-17.84	-28.71
110	-18.13	-29.18
120	-18.29	-29.43
130	-18.34	-29.52
140	-18.55	-29.85
150	-18.70	-30.10
160	-18.84	-30.32
170	-18.96	-30.52
180	-19.00	-30.58
190	-19.09	-30.73
200	-19.16	-30.83
210	-19.25	-30.98
220	-19.27	-31.01
230	-19.34	-31.12
240	-19.46	-31.31
250	-19.51	-31.40



Lateral Crash Pulse (First Record)

Time (msec)	Delta-V, Lateral (MPH)	Delta-V, Lateral (km/h)
0	-0.04	-0.07
10	0.09	0.14
20	1.46	2.35
30	2.85	4.58
40	3.52	5.67
50	4.78	7.69
60	6.75	10.87
70	9.35	15.05
80	10.38	16.71
90	10.97	17.66
100	11.28	18.15
110	11.34	18.25
120	11.30	18.18
130	11.25	18.11
140	11.57	18.62
150	11.61	18.69
160	11.69	18.82
170	11.58	18.64
180	11.50	18.50
190	11.41	18.36
200	11.28	18.16
210	11.12	17.90
220	11.07	17.82
230	11.10	17.87
240	11.12	17.90
250	11.00	17.71

Vehicle Roll Angle (First Record)



Vehicle Roll Angle (First Record)

Time (sec)	Vehicle Roll Angle (deg)
-1.0	0.53
-0.9	0.47
-0.8	0.26
-0.7	0.00
-0.6	-0.13
-0.5	-0.12
-0.4	0.09
-0.3	0.08
-0.2	-0.27
-0.1	-0.46
0.0	-0.15
0.1	0.67
0.2	-4.13
0.3	-7.01
0.4	-4.14
0.5	1.58
0.6	4.91
0.7	-0.28
0.8	-2.28
0.9	1.43
1.0	3.19

Time (sec)	Vehicle Roll Angle (deg)
1.1	4.07
1.2	6.62
1.3	5.58
1.4	0.98
1.5	-1.10
1.6	-0.64
1.7	0.19
1.8	1.68
1.9	1.09
2.0	0.50
2.1	0.32
2.2	0.32
2.3	0.20
2.4	0.16
2.5	0.39
2.6	0.59
2.7	0.61
2.8	0.56
2.9	0.59
3.0	0.72
3.1	0.72

Time (sec)	Vehicle Roll Angle (deg)
3.2	0.72
3.3	0.72
3.4	0.72
3.5	0.72
3.6	0.72
3.7	0.72
3.8	0.72
3.9	0.72
4.0	0.72
4.1	0.72
4.2	0.72
4.3	0.72
4.4	0.72
4.5	0.72
4.6	0.72
4.7	0.72
4.8	0.72
4.9	0.72
5.0	0.72

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.

\$5B17 - Event Type
12 00 00 00

\$F113 - RCM Part Number
48 42 35 54 2D 31 34 42 33 32 31 2D 41 41 00 00 00 00 00 00 00 00 00 00

\$F18C - RCM Serial Number
33 35 30 32 33 39 34 33 33 37 35 33 30 30 30 30

\$F188 - RCM Software Part Number
47 52 33 54 2D 31 34 43 30 32 38 2D 41 41 00 00 00 00 00 00 00 00 00 00

\$5800 - Left/Center Frontal Restraints Sensor Serial Number
00 20 2A E7 4D 9D 56 00 00 00 00 00 00 00 00 00

\$5801 - Left Side Restraints Sensor One Serial Number
00 00 00 54 83 8F 92 00 00 00 00 00 00 00 00 00

\$5802 - Left Side Restraints Sensor Two Serial Number
00 06 2A E4 87 56 72 00 00 00 00 00 00 00 00 00

\$5804 - Right Frontal Restraints Sensor Serial Number
00 20 2A E7 4D 91 5B 00 00 00 00 00 00 00 00 00

\$5805 - Right Side Restraints Sensor One Serial Number
00 00 00 1F 32 4E 92 00 00 00 00 00 00 00 00 00

\$5806 - Right Side Restraints Sensor Two Serial Number
00 30 2A E9 DC 83 68 00 00 00 00 00 00 00 00 00

\$DE00 - Original VIN
31 46 4D 35 4B 37 46 38 37 4A 47 2A 2A 2A 2A 2A 2A

\$F190 - Current VIN
31 46 4D 35 4B 37 46 38 37 4A 47 2A 2A 2A 2A 2A 2A 00 00 00 00 00 00 00

\$DE01 - RCM Option Content
E7 68 EE 3B 10 0C 67 08

\$5817 - Event Record 1

65 08 00 00 69 08 00 00 F9 CE 08 00 00 77 00 00 00 55 25 00 00 9C 45 00 00 BA 28 00 00 D4 84 00 00
FC 6E 00 00 59 FD FF FF 2E 00 00 00 30 02 00 00 00 F8 07 00 00 64 0C 00 00 FE 11 00 00 90 1E 00 00
02 29 00 00 A8 32 00 00 8E 38 00 00 90 3C 00 00 00 0C 3E 00 00 0E 3F 00 00 9C 3F 00 00 CC 3F 00 00
80 40 00 00 0A 41 00 00 88 41 00 00 F6 41 00 00 18 42 00 00 66 42 00 00 9E 42 00 00 F2 42 00 00
04 43 00 00 40 43 00 00 AA 43 00 00 DC 43 00 00 D8 FF FF FF 4E 00 00 00 12 05 00 00 E8 09 00 00
3E 0C 00 00 A0 10 00 00 7C 17 00 00 88 20 00 00 1E 24 00 00 2C 26 00 00 38 27 00 00 6E 27 00 00
48 27 00 00 22 27 00 00 3C 28 00 00 62 28 00 00 AA 28 00 00 4A 28 00 00 FA 27 00 00 AE 27 00 00
3C 27 00 00 AE 26 00 00 80 26 00 00 A0 26 00 00 AC 26 00 00 46 26 00 00 00 00 00 00 00 00 00 00 00
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2E 00 00 00 30 02 00 00 F8 07 00 00 64 0C 00 00 FE 11 00 00 90 1E 00 00 02 29 00 00 A8 32 00 00
8E 38 00 00 90 3C 00 00 0C 3E 00 00 0E 3F 00 00 9C 3F 00 00 CC 3F 00 00 80 40 00 00 0A 41 00 00
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3C 28 00 00 62 28 00 00 A0 01 00 00 6F 01 00 00 CF 00 00 00 02 00 00 00 9E FF FF FF A2 FF FF FF
47 00 00 00 3B 00 00 00 2E FF FF FF 9B FE FF FF 8A FF FF FF 0B 02 00 00 65 F3 FF FF 9C EA FF FF
60 F3 FF FF D6 04 00 00 FE 0E 00 00 24 FF FF FF 08 F9 FF FF 5E 04 00 00 C0 09 00 00 6D 0C 00 00
30 14 00 00 06 11 00 00 FB 02 00 00 A8 FC FF FF 0F FE FF FF 98 00 00 00 20 05 00 00 56 03 00 00
8A 01 00 00 F9 00 00 00 FB 00 00 00 9F 00 00 00 7C 00 00 00 31 01 00 00 CF 01 00 00 E0 01 00 00
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EA FF EB FF EA FF EA FF E8 FF E0 FF E7 FF F1 FF F3 FF F5 FF F8 FF F9 FF 00 00 03 00 04 00 04 00
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4A 00 27 00 35 00 29 00 26 00 2D 00 1B 00 1C 00 24 00 1E 00 24 00 32 00 20 00 1C 00 24 00 21 00
0E 00 15 00 15 00 17 00 0F 00 2A 00 33 00 32 00 3E 00 44 00 45 00 3F 00 38 00 27 00 40 00 3A 00
37 00 3B 00 32 00 38 00 3C 00 32 00 35 00 31 00 31 00 41 00 40 00 4B 00 51 00 28 00 4F FE BD FD
5F FD 73 FD 1A FD 22 FD E9 FF FC FF EF FF E6 FF 00 00 FD FF F2 FF F4 FF ED FF E6 FF F4 FF F4 FF
E9 FF EA FF F1 FF F4 FF 00 00 FF FF 0A 00 07 00 FB FF 0B 00 F9 FF DA FF 00 00 0D 00 FE FF 09 00
FE FF F5 FF FA FF FC FF FC FF 0E 00 10 00 03 00 0E 00 07 00 00 00 FB FF EF FF B4 FF 86 FF 3D FF
31 FF BD FF 62 FF 3F FF 25 FF 73 FF 00 00 C1 FF D1 FF F9 FF 09 00 01 00 F7 FF FB FF EF FF CB FF
DF FF E1 FF E7 FF ED FF F5 FF F5 FF F7 FF FB FF F9 FF F3 FF F3 FF E5 FF EF FF DB FF E9 FF FF FF
F5 FF E9 FF ED FF EF FF FD FF 09 00 01 00 09 00 07 00 FB FF F7 FF F9 FF 03 00 FD FF 01 00 E9 FF
8D FF 01 FF 64 FE 6C FE 3A FF 84 FF 9F FE 74 FD AD FD BF FE 9F FF 9B FF FA FF EC FF 1B 00 FA FF
AD FF 91 FF 8A FF CC FF D7 FF 0D 00 81 00 5E 00 81 00 DB 00 C0 00 99 00 68 00 E8 FF FD FF D0 FF
1B 00 3E 00 1F 00 FD FF A9 FF 8A FF CC FF C9 FF 0A 00 53 00 73 00 26 00 1B 00 DA FF F6 FF EC FF
0A 00 FD FF A2 FF 21 FF BC FE 02 FF 91 FF 57 00 9D 00 4B FF A7 FE 50 00 4B 01 34 00 00 00 34 00
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00 0E 01 00 01 00 51 00 1A 00 10 8A E5 CB 1C D6 00 CB 04 B0 00 00 67 00 01 0D 00 03 00 0F 10
8A E5 D7 1D 14 00 CB 03 96 00 00 00 77 00 01 0D 00 03 00 0F 10 8A E5 D7 1D 59 00 CB 03 A1 00 00
00 79 00 01 0D 00 03 00 0F 10 8A E5 D7 1D 98 00 A9 03 9A 00 00 00 63 00 01 0D 00 03 00 0F 10 8A
E5 E3 1D C2 00 DB 03 D9 00 00 00 7B 00 01 0D 00 03 00 0F 10 8A E5 E3 1E 28 01 05 03 CB 00 00 00
A2 00 01 0D 00 03 00 0F 10 8A E5 EF 1E 98 01 05 03 C1 00 00 00 A5 00 01 0D 00 03 00 0F 10 8A E5
EF 1E E4 01 05 03 CB 00 00 00 A6 00 01 0D 00 03 00 0F 10 8A E5 EF 1F 44 01 0E 03 DE 00 00 00 A4
00 01 0D 00 03 00 0F 10 8A E5 FB 1F 6D 00 00 03 F0 03 DB 00 50 00 01 0E 00 03 00 0F 10 8A E5 FB
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