

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	1FTEW1CG6FKD64892
User	
Case Number	2015 Ford F150
EDR Data Imaging Date	09/23/2015
Crash Date	
Filename	1FTEW1CG6FKD64892_ACM.CDRX
Saved on	Wednesday, September 23 2015 at 15:03:15
Collected with CDR version	Crash Data Retrieval Tool 16.1
Reported with CDR version	Crash Data Retrieval Tool 16.1
EDR Device Type	Airbag Control Module
ACM Adapter Detected During Download	Yes
Event(s) recovered	locked frontal event Fuel cutoff level 1

Comments

No comments entered.

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 Wednesday, September 23 2015 at 15:03:15.

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	1FTEW1CG6FKD64892
Current VIN from PCM	1FTEW1CG6FKD64892
Ignition Cycle, Download (First Record)	98
Ignition Cycle, Download (Second Record)	N/A
Restraints Control Module Part Number	FL3T-14B321-BA
Restraints Control Module Serial Number	3019125300000000
Restraints Control Module Software Part Number (Version)	FL3T-14C028-AA
Driver Side/Center Frontal Restraints Sensor Serial Number	00A91A72
Driver, Row 1, Side Restraint Sensor 1 Serial Number	000000E4
Driver, Row 2, Side Restraint Sensor 2 Serial Number	00A91A82
Passenger Frontal Restraints Sensor Serial Number	00A91A72
Passenger, Row 1, Side Restraint Sensor 1 Serial Number	000000D1
Passenger, Row 2, Side Restraint Sensor 2 Serial Number	00991A82

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)	13,825
Key-On Timer at Event Time Zero (sec)	360
Vehicle Voltage at Time Zero (V)	13.0
Energy Reserve Mode Entered During Event (Yes, No)	Yes
Time Yaw Rate Lost	149.5
Time Front Passenger Restraint Sensor Lost Relative to Time Zero (msec)	181.0

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
Frontal Airbag Deployment, Time to First Stage Deployment, Front Passenger (msec)	26.0
Pretensioner (Retractor) Deployment, Time to Fire, Driver (msec)	7.5
Pretensioner (Retractor) Deployment, Time to Fire, Right Front Passenger (msec)	7.5
Frontal Airbag Deployment, Time to 2nd Stage, Driver (msec)	46.0
Frontal Airbag Deployment, Time to 2nd Stage, Front Passenger (msec)	36.0
Side Airbag Deployment, Time to Deploy, Right Front Passenger (msec)	77.0
Side Airbag/Curtain Airbag Deployment, Time to Deploy, Passenger Right Side (msec)	77.0
Pretensioner (Anchor) Deployment, Time to Fire, Driver (msec)	12.5
Pretensioner (Anchor) Deployment, Time to Fire, Right Front Passenger (msec)	12.5
Adaptive Steering Column Deployment, Time to Deploy, Driver (msec)	26.0
Canister Vent Deployment, Time to Fire, Passenger (msec)	176.0
Maximum Delta-V, Longitudinal (MPH [km/h])	-28.19 [-45.37]
Time, Maximum Delta-V Longitudinal (msec)	110.0
Driver or center, front satellite sensor, Discriminating Deployment	Yes
Driver or center, front satellite sensor, Safing 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	97
Frontal Air Bag Warning Lamp, On/Off	Off
Occupant Size Classification, Front Passenger (Child size Yes/No [Hex value])	No [\$08]
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	Buckled
Brake Telltale	On
ABS Telltale	Off
ESC/TC Telltale	Off
ESC/TC Off Telltale	Default Mode
Powertrain Wrench Telltale	Off
Powertrain Malfunction Indicator Lamp (MIL) Telltale	On

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

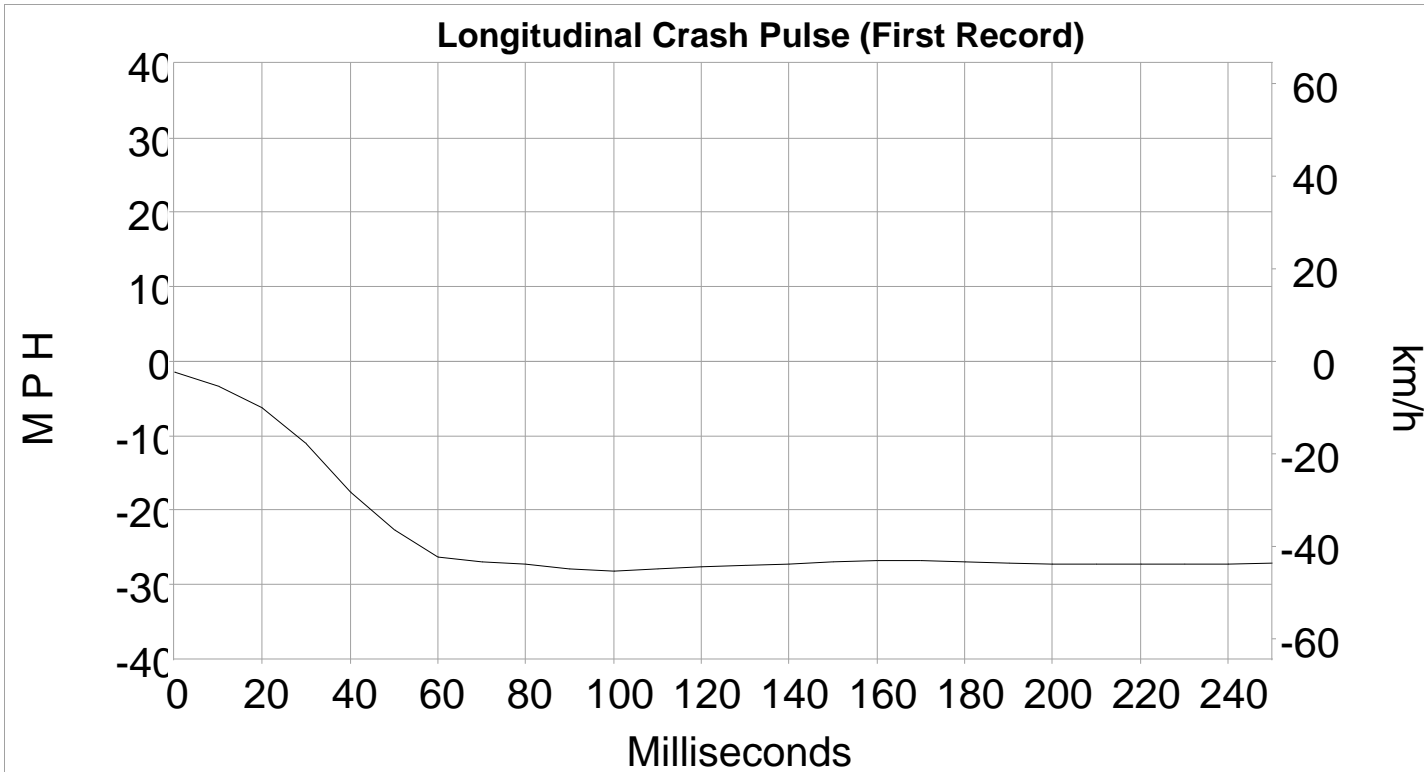
Time (sec)	Speed, Vehicle Indicated (MPH [km/h])	Speed, Vehicle Indicated, Quality Factor	Accelerator Pedal, % Full	Accelerator Pedal, % Full, Quality Factor	Service Brake, On/Off	Service brake, Quality Factor	Engine RPM	ABS Activity (Engaged, Non-Engaged)	Brake Powertrain Torque Request 1	Brake Powertrain Torque Request 2	Traction Control via Brakes	Wheel Torque (N-m)	Speed Control Status	Drive Select (Auto)
- 5.0	0.0 [0]	OK	45.1	OK	Off	OK	0	non-engaged	No	No	No	0	Off	Ne
- 4.5	0.0 [0]	OK	45.1	OK	Off	OK	0	non-engaged	No	No	No	0	Off	Ne
- 4.0	0.0 [0]	OK	45.1	OK	Off	OK	0	non-engaged	No	No	No	0	Off	Ne
- 3.5	0.0 [0]	OK	45.1	OK	Off	OK	0	non-engaged	No	No	No	0	Off	Ne
- 3.0	0.0 [0]	OK	45.1	OK	Off	OK	0	non-engaged	No	No	No	0	Off	Ne
- 2.5	0.0 [0]	OK	45.1	OK	Off	OK	0	non-engaged	No	No	No	0	Off	Ne
- 2.0	0.0 [0]	OK	45.1	OK	Off	OK	0	non-engaged	No	No	No	0	Off	Ne
- 1.5	0.0 [0]	OK	45.1	OK	Off	OK	0	non-engaged	No	No	No	0	Off	Ne
- 1.0	0.0 [0]	OK	45.1	OK	Off	OK	0	non-engaged	No	No	No	0	Off	Ne
- 0.5	0.0 [0]	OK	45.1	OK	Off	OK	0	non-engaged	No	No	No	0	Off	Ne
0.0	0.0 [0]	OK	45.1	OK	Off	OK	0	non-engaged	No	No	No	0	Off	Ne

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	-0.01	-0.01	0.29	0.00	0.3
-4.9	-0.01	-0.01	0.24	0.07	0.3
-4.8	-0.01	-0.01	0.29	0.07	0.3
-4.7	-0.01	-0.01	0.29	0.00	0.3
-4.6	-0.01	-0.01	0.26	0.03	0.3
-4.5	-0.01	-0.01	0.29	0.07	0.3
-4.4	-0.01	-0.01	0.26	0.00	0.3
-4.3	-0.01	-0.01	0.29	0.11	0.3
-4.2	-0.01	-0.01	0.26	-0.03	0.3
-4.1	-0.01	-0.01	0.29	0.03	0.3
-4.0	-0.01	-0.02	0.26	0.07	0.3
-3.9	-0.01	-0.01	0.26	0.03	0.3
-3.8	-0.01	-0.01	0.33	0.07	0.3
-3.7	-0.01	-0.01	0.24	0.07	0.3
-3.6	-0.01	-0.01	0.29	0.00	0.3
-3.5	-0.01	-0.01	0.29	0.03	0.3
-3.4	-0.01	-0.01	0.22	0.11	0.3
-3.3	-0.01	-0.01	0.24	0.00	0.3
-3.2	-0.01	-0.01	0.24	0.00	0.3
-3.1	-0.01	-0.01	0.24	0.00	0.3
-3.0	-0.01	-0.01	0.26	0.03	0.3
-2.9	-0.01	-0.01	0.22	0.07	0.3
-2.8	-0.01	-0.01	0.33	0.00	0.3
-2.7	-0.01	-0.01	0.24	0.07	0.3
-2.6	-0.01	-0.01	0.26	0.03	0.3
-2.5	-0.01	-0.01	0.26	0.03	0.3
-2.4	-0.01	-0.01	0.24	0.11	0.3
-2.3	-0.01	-0.01	0.19	0.07	0.3
-2.2	-0.01	-0.01	0.24	0.07	0.3
-2.1	-0.01	-0.01	0.24	0.03	0.3
-2.0	-0.01	-0.01	0.26	0.03	0.3
-1.9	-0.01	-0.01	0.31	0.00	0.3
-1.8	-0.01	-0.01	0.26	0.00	0.3
-1.7	-0.01	-0.01	0.26	0.07	0.3
-1.6	-0.01	-0.01	0.17	0.00	0.3
-1.5	-0.01	-0.01	0.26	0.03	0.3
-1.4	-0.01	-0.01	0.22	0.00	0.3
-1.3	-0.01	-0.01	0.31	0.11	0.3
-1.2	-0.01	-0.01	0.31	0.03	0.3
-1.1	-0.01	-0.01	0.31	0.07	0.3
-1.0	-0.01	-0.01	0.19	0.03	0.3
-0.9	-0.01	-0.01	0.29	0.07	0.3
-0.8	-0.01	-0.01	0.29	0.11	0.3
-0.7	-0.01	-0.01	0.29	-0.03	0.3
-0.6	-0.01	-0.01	0.26	0.00	0.3
-0.5	-0.01	-0.01	0.22	0.00	0.3
-0.4	-0.01	-0.01	0.24	-0.03	0.3
-0.3	-0.01	-0.01	0.22	0.03	0.3
-0.2	-0.01	-0.01	0.24	0.11	0.3
-0.1	-0.01	-0.02	0.26	0.00	0.3
0.0	-0.01	-0.01	0.38	0.00	0.3

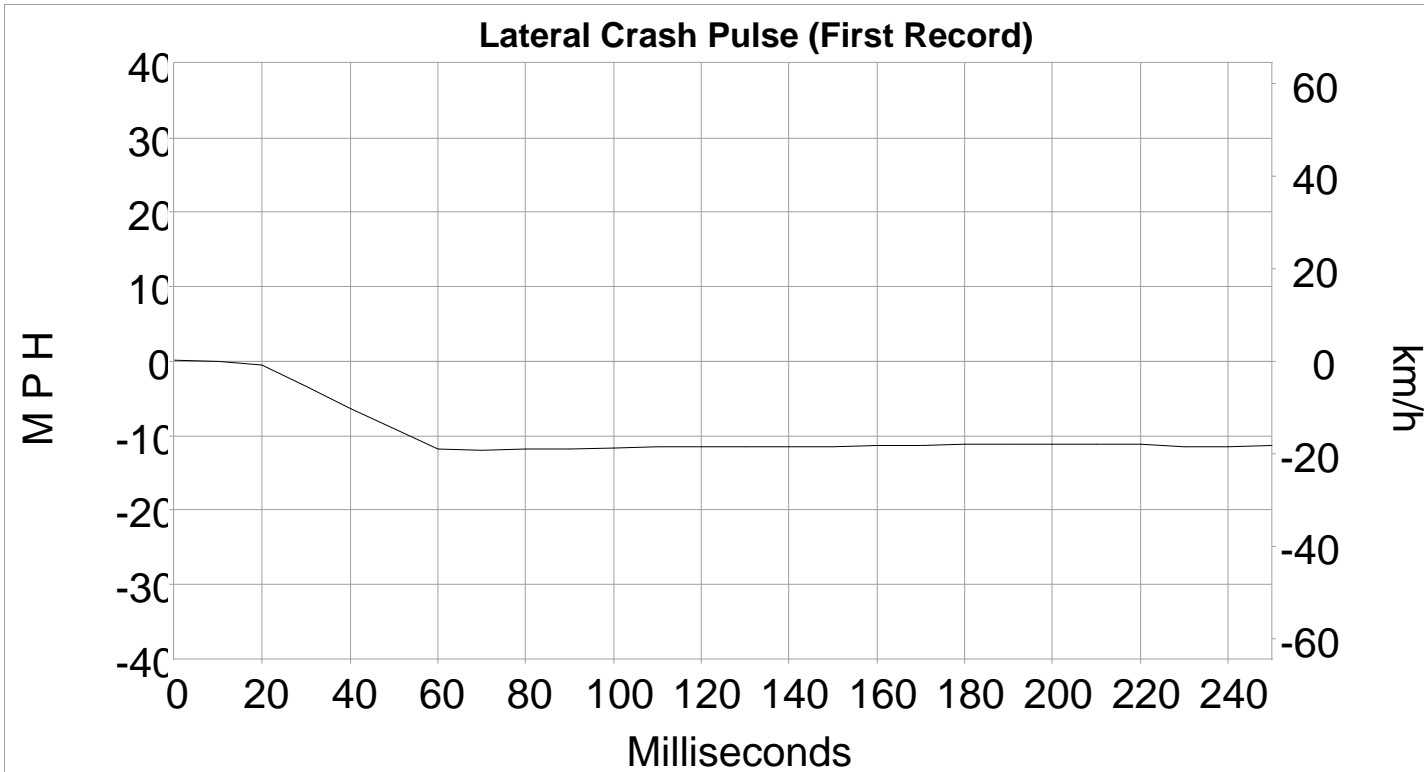
Post-Crash Data 0 to 5 sec [4 samples/sec] (First Record)

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



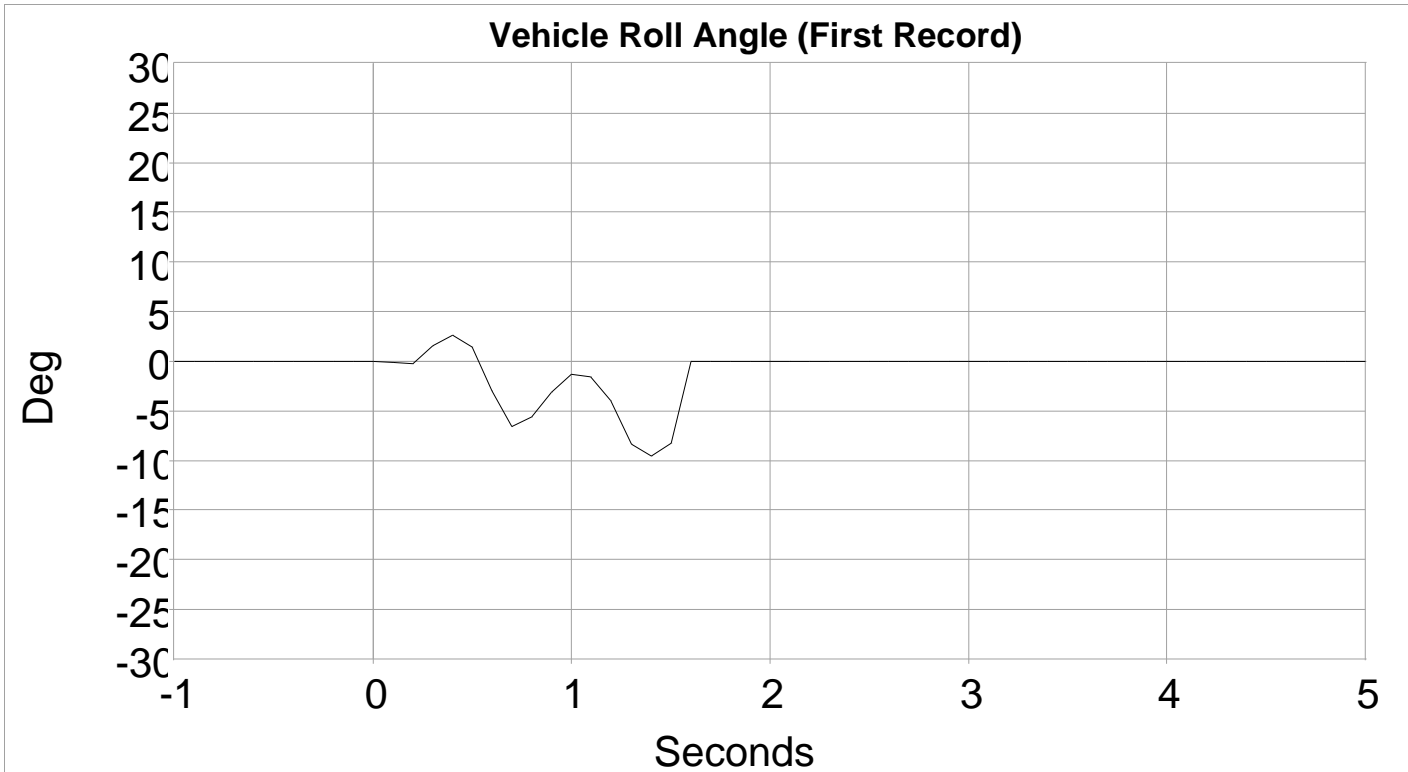
Longitudinal Crash Pulse (First Record)

Time (msec)	Delta-V, longitudinal (MPH)	Delta-V, longitudinal (km/h)
0	-1.39	-2.23
10	-3.27	-5.27
20	-6.18	-9.94
30	-10.97	-17.65
40	-17.56	-28.26
50	-22.58	-36.34
60	-26.36	-42.42
70	-26.88	-43.26
80	-27.20	-43.78
90	-27.92	-44.94
100	-28.18	-45.35
110	-27.84	-44.81
120	-27.61	-44.43
130	-27.41	-44.11
140	-27.28	-43.91
150	-27.00	-43.46
160	-26.81	-43.14
170	-26.83	-43.18
180	-26.95	-43.37
190	-27.15	-43.69
200	-27.19	-43.76
210	-27.23	-43.82
220	-27.21	-43.79
230	-27.18	-43.74
240	-27.23	-43.83
250	-27.16	-43.71



Lateral Crash Pulse (First Record)

Time (msec)	Delta-V, Lateral (MPH)	Delta-V, Lateral (km/h)
0	0.16	0.26
10	0.06	0.10
20	-0.54	-0.87
30	-3.36	-5.40
40	-6.41	-10.31
50	-9.07	-14.60
60	-11.83	-19.04
70	-11.87	-19.11
80	-11.79	-18.98
90	-11.74	-18.89
100	-11.63	-18.71
110	-11.49	-18.49
120	-11.46	-18.44
130	-11.43	-18.39
140	-11.46	-18.44
150	-11.42	-18.38
160	-11.30	-18.18
170	-11.27	-18.13
180	-11.14	-17.93
190	-11.08	-17.83
200	-11.09	-17.85
210	-11.13	-17.92
220	-11.23	-18.08
230	-11.43	-18.40
240	-11.46	-18.45
250	-11.36	-18.29



Vehicle Roll Angle (First Record)

Time (sec)	Vehicle Roll Angle (deg)
-1.0	0.00
-0.9	0.00
-0.8	0.00
-0.7	0.00
-0.6	0.00
-0.5	0.00
-0.4	0.00
-0.3	0.00
-0.2	0.00
-0.1	0.00
0.0	0.00
0.1	-0.11
0.2	-0.29
0.3	1.52
0.4	2.68
0.5	1.45
0.6	-2.99
0.7	-6.56
0.8	-5.63
0.9	-3.07
1.0	-1.36

Time (sec)	Vehicle Roll Angle (deg)
1.1	-1.53
1.2	-3.98
1.3	-8.36
1.4	-9.53
1.5	-8.26
1.6	0.00
1.7	0.00
1.8	0.00
1.9	0.00
2.0	0.00
2.1	0.00
2.2	0.00
2.3	0.00
2.4	0.00
2.5	0.00
2.6	0.00
2.7	0.00
2.8	0.00
2.9	0.00
3.0	0.00
3.1	0.00

Time (sec)	Vehicle Roll Angle (deg)
3.2	0.00
3.3	0.00
3.4	0.00
3.5	0.00
3.6	0.00
3.7	0.00
3.8	0.00
3.9	0.00
4.0	0.00
4.1	0.00
4.2	0.00
4.3	0.00
4.4	0.00
4.5	0.00
4.6	0.00
4.7	0.00
4.8	0.00
4.9	0.00
5.0	0.00

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.

12 00 00 00

46 4C 33 54 2D 31 34 42 33 32 31 2D 42 41 00 00 00 00 00 00 00 00 00 00

33 30 31 39 31 32 35 33 30 30 30 30 30 30 30

46 4C 33 54 2D 31 34 43 30 32 38 2D 41 41 00 00 00 00 00 00 00 00 00 00

00 A9 1A 72 80 49 20 00 00 00 00 00 00 00 00

00 00 00 E4 47 49 41 00 00 00 00 00 00 00 00

00 A9 1A 82 73 1D 22 00 00 00 00 00 00 00 00

00 A9 1A 72 80 12 10 00 00 00 00 00 00 00 00

00 00 00 D1 07 49 41 00 00 00 00 00 00 00 00

00 99 1A 82 73 59 0F 00 00 00 00 00 00 00 00

31 46 54 45 57 31 43 47 36 46 4B 44 36 34 38 39 32

31 46 54 45 57 31 43 47 36 46 4B 44 36 34 38 39 32 00 00 00 00 00 00 00

E7 68 CC 3B 10 0C 67 00

Disclaimer of Liability

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