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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	5N1AL0MM6DC******
User	
Case Number	
EDR Data Imaging Date	06/18/2012
Crash Date	
Filename	SAMPLE_NISSAN.CDRX
Saved on	Monday, June 18 2012 at 16:49:07
Imaged with CDR version	Crash Data Retrieval Tool 6.0
Reported with CDR version	Crash Data Retrieval Tool 19.4.2
Reported with Software Licensed to (Company Name)	Crash Data Group
EDR Device Type	Airbag Control Module
Event(s) recovered	Event Record 1

Comments

Vehicle: 2013 Infinity JX 35
Cable used: F00K108780

Data Limitations

General Information:
Data limitations are intended to assist in reading event data that has been imaged from the vehicle's Air bag Control Unit (ACU). Event data should be considered in conjunction with other available physical evidence from the vehicle and scene.

Airbag Control Unit (ACU)
- The Air bag Control Unit (ACU) can store two types of events: Non-Deployment Events and Deployment.
    - A Non-Deployment Event is a crash or other physical occurrence which causes the ACU algorithm to be activated, but in which deployment thresholds are not reached.
    - A Deployment Event is a crash or other physical occurrence which causes ACU deployment thresholds to be reached or exceeded. Depending on the vehicle model, one or more of the following may be activated during a Deployment Event: front air bags, seat-mounted side airbags, roof-mounted or door-mounted curtain air bags, pretensioners, or pop-up roll bars.

- The ACU can record up to two events. If additional events occur subsequently, the older of the two events already recorded (i.e. the one which occurred first) is overwritten.
    - A Non-Deployment Event can be overwritten by another Non-Deployment event, or by a Deployment Event.
    - A Deployment Event has higher priority than a Non-Deployment Event, and cannot be interrupted or overwritten by another event.
    - The data pertaining to a Deployment Event is locked after being recorded. However, a second event can still be recorded subsequently in the portion of the event memory which is not locked.

- Event data includes both pre-crash data and crash data.
    - If the power supply to the ACU is lost during an event, all or part of the event data may not be recorded.
    - In addition to the recording of event data, the ACU has the ability to perform diagnostics and record Diagnostic Trouble Codes (DTCs).

Data Element Sign Convention:
The following table provides an explanation of the sign convention for data elements in the CDR report.

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
Vehicle Roll Angle	Left to Right Rotation
Steering Input	Left Turn

- "Life Time Counter (sec)" indicates the elapsed time, in seconds, from the vehicle's first ignition activation until the start of the first recorded event. The counter is incremented whenever the vehicle's ignition is on. The counter is reset to 0 if the ACU is replaced.
- "Complete File Recorded" indicates whether a complete EDR data set has been stored after the event. "Yes" indicates that a complete data set has been recorded. "No" indicates that only a portion of the data set has been recorded, for example due to the power to the ACU being lost during the event.
- "Multi-Event, Number of Events (1, 2)" indicates the number of events which are stored during a given ignition cycle. A Multi-Event occurs whenever the time between Event 2 trigger threshold and Event 1 trigger threshold is less than or equal to 5 seconds during the same ignition

cycle, and "2" will be recorded in this case. Otherwise, "1" will be recorded.
- "Air Bag Warning Lamp (On, Off)" indicates whether the ACU was in trouble mode or in normal operation mode at the time of the event. "On" indicates that the air bag warning lamp was illuminated at the time of the event, and the ACU was in trouble mode. "Off" indicates that the air bag warning lamp was not illuminated at the time of the event, and the ACU was in normal operation mode.
- "Frontal Air Bag Suppression Switch Status" indicates whether front passenger air bag deployment was suppressed at the time of the event. "On" indicates that the front passenger air bag was suppressed at the time of the event (deployment inhibited). "Off" indicates that the front passenger air bag was not suppressed at the time of the event (deployment enabled). This data will not be available for all vehicles.
- "Delta-V, Longitudinal" indicates the cumulative change in velocity along the longitudinal direction.
- "Acceleration, Longitudinal" indicates the rate of change of velocity with time along the longitudinal direction.
- "Delta-V, Lateral" indicates the cumulative change in velocity along the lateral direction.
- "Acceleration, Lateral" indicates the rate of change of velocity with time along the lateral direction.
- "Engine Throttle, % full" indicates the position of the accelerator pedal as a percentage of the fully depressed position.
- "Service Brake (On, Off)" indicates whether the service brake is activated ("On") or not activated ("Off").
- "Steering Input (deg)" indicates the angular displacement of the steering wheel measured in degrees. -250 deg indicates a 250 degree turn to the right of the steering wheel, 0 deg indicates the straight-ahead steering wheel position, and 250 deg indicates a 250 degree turn to the left of the steering wheel.
- The notation "CLP" indicates that the measurement captured by a sensor exceeded the design range of the sensor.
- "Seat Track Position Switch, Foremost, Status, Driver (Yes/No)" indicates whether the driver's seat is positioned within a designated threshold value of the most forward adjustment position. "Yes" indicates that the driver's seat is positioned within a designated threshold value of the most forward adjustment position. For all other adjustment positions, "No" is displayed. This data will not be available if the seat track position switch is not installed in the vehicle.
- "Occupant Size Classification, Right Front Passenger, Child (Yes/No)" indicates whether or not the right front passenger is classified as a child (as defined in 49 CFR part 572, subpart N or smaller). This data will not be available for all vehicles.
- "e-pedal ON/OFF Status" indicates whether "e-pedal" is activated (ON), or not activated (OFF). This data will not be available for all vehicles.
- "ABS Warning lamp, on/off" indicates whether "Anti-lock Brake System" was in trouble mode or in normal operation mode at the time of the event. This data will not be available for all vehicles.
- "AEB/FCW switch status ON/OFF (from ADAS)" 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.
- "AEB Warning lamp (from ADAS)" indicates whether "Automatic Emergency Braking controlled by ADAS unit" was in trouble mode or in normal operation mode at the time of the event. This data will not be available for all vehicles.
- "ABS regulation status" indicates whether "Anti-lock Brake System" was activated (ABS in regulation), or not activated (no ABS regulation). This data will not be available for all vehicles.
- "VDC switch status ON/OFF" indicates whether the switch of "Vehicle Dynamic Control" in ON, or OFF. This data will not be available for all vehicles.
- "VDC status/warning" indicates whether "Vehicle Dynamic Control" was in normal operation mode and not activated (No failure and no control), in trouble mode and not activated (Failure), or in normal mode and activated (In active control). This data will not be available for all vehicles.
- "Adaptive Cruise Control status" indicates whether "Intelligent Cruise Control status" was activated (ACC activated), waiting (ACC waiting), suspended (ACC suspended), or not activated (No display request). This data will not be available for all vehicles.
- "AEB operating capability" indicates whether "Automatic Emergency Braking" was in trouble mode (Impossible to execute request) or in normal operation mode (Braking fully operational). This data will not be available for all vehicles.
- "AEB Brake request (from ADAS)" indicates whether "Automatic Emergency Braking controlled by ADAS unit" was activated (Brake Torque AEB Maximum), or not activated (No Brake Request). This data will not be available for all vehicles.

Hexadecimal Data:
All data that has been specified for retrieval is shown in the Hexadecimal Data section of this report. However, the Hexadecimal Data section may contain data that is not translated by the CDR tool.

Data Sources:
- Crash data is measured internally in the ACU.
- Pre-crash data is not measured internally in the ACU, but is transmitted from other control units through the Controller Area Network (CAN).
- Pre-crash data and crash data are asynchronous.

0701_Nissan001_r008

DTCs at Time of Retrieval

DTC	Status	Description
B1210	Current	SIDE COLLISION DETECTION
B1086	Current	PRE-TEN FRONT LH [OPEN]
B1150	Current	CURTAIN MODULE LH [OPEN]
B1134	Current	SIDE MODULE LH [OPEN]
B1023	Current	PASS A/B INDCTR CKT
B1035	Current	CRASH ZONE SEN [COMM FAIL]
B1115	Current	SATELLITE SENS RH [COMM FAIL]
B1120	Current	SATELLITE SENS LH [COMM FAIL]
B1338	Current	FR-RH DOOR SATEL SENS [COMM MALFUNCTION]
B1345	Current	FR-LH DOOR SATEL SENS [COMM MALFUNCTION]
B1049	Current	DRIVER AIRBAG MODULE [OPEN]
B1054	Current	DRIVER AIRBAG MODULE [OPEN]
B1065	Current	ASSIST A/B MODULE [OPEN]
B1070	Current	ASSIST A/B MODULE [OPEN]
B1081	Current	PRE-TEN FRONT RH [OPEN]
B1129	Current	SIDE MODULE RH [OPEN]
B1132	Trouble Diag. Record	SIDE MODULE RH [SHORT]
B1148	Trouble Diag. Record	CURTAIN MODULE RH [SHORT]

System Status at Event (Event Record 1)

Life Time Counter (sec)	5376
Complete File Recorded (Yes/No)	Yes (Complete)
Ignition Cycle, Crash	104
Ignition Cycle, Download	105
Multi-Event, Number of Events (1, 2)	1
Time from Event 1 to 2 (sec)	N/A
Safety Belt Status, Driver	On (Fastened)
Safety Belt Status, Right Front Passenger	Off (Unfastened)
Frontal Air Bag Warning Lamp (On, Off)	Off
Frontal Air Bag Suppression Switch Status	On (AS airbag inhibit)
Maximum Delta-V, Longitudinal (MPH [km/h])	-4 [-6]
Time, Maximum Delta-V, Longitudinal (msec)	62.5
Maximum Delta-V, Lateral (MPH [km/h])	16 [26]
Time, Maximum Delta-V, Lateral (msec)	110
Maximum Acceleration, Longitudinal (g)	20.5
Time, Maximum Acceleration, Longitudinal (msec)	25
Maximum Acceleration, Lateral (g)	55
Time, Maximum Acceleration, Lateral (msec)	22.5

Pre-Crash Data -5 to 0 sec [2 samples/sec] (Event Record 1)
(the most recent sampled values are recorded prior to the event)

Time Stamp (sec)	Speed, Vehicle Indicated (MPH [km/h])	Accelerator Pedal, % full	Engine RPM	Motor RPM	Service Brake (On, Off)	Steering Input (deg)
-5.0	24 [39]	16	2650	0	Off (Brake Not Activated)	-32
-4.5	23 [37]	11.5	1750	0	Off (Brake Not Activated)	-2
-4.0	21 [34]	9	1200	0	On (Brake Activated)	28
-3.5	15 [24]	9	1150	0	On (Brake Activated)	14
-3.0	13 [21]	4	950	0	On (Brake Activated)	4
-2.5	11 [17]	4	950	0	On (Brake Activated)	4
-2.0	5 [8]	4	900	0	On (Brake Activated)	-48
-1.5	3 [5]	4	850	0	On (Brake Activated)	-98
-1.0	1 [2]	4	850	0	On (Brake Activated)	-160
-0.5	3 [5]	10.5	1100	0	Off (Brake Not Activated)	-194
0.0	6 [9]	16	1150	0	Off (Brake Not Activated)	-218

Delta V, Longitudinal (Event Record 1)
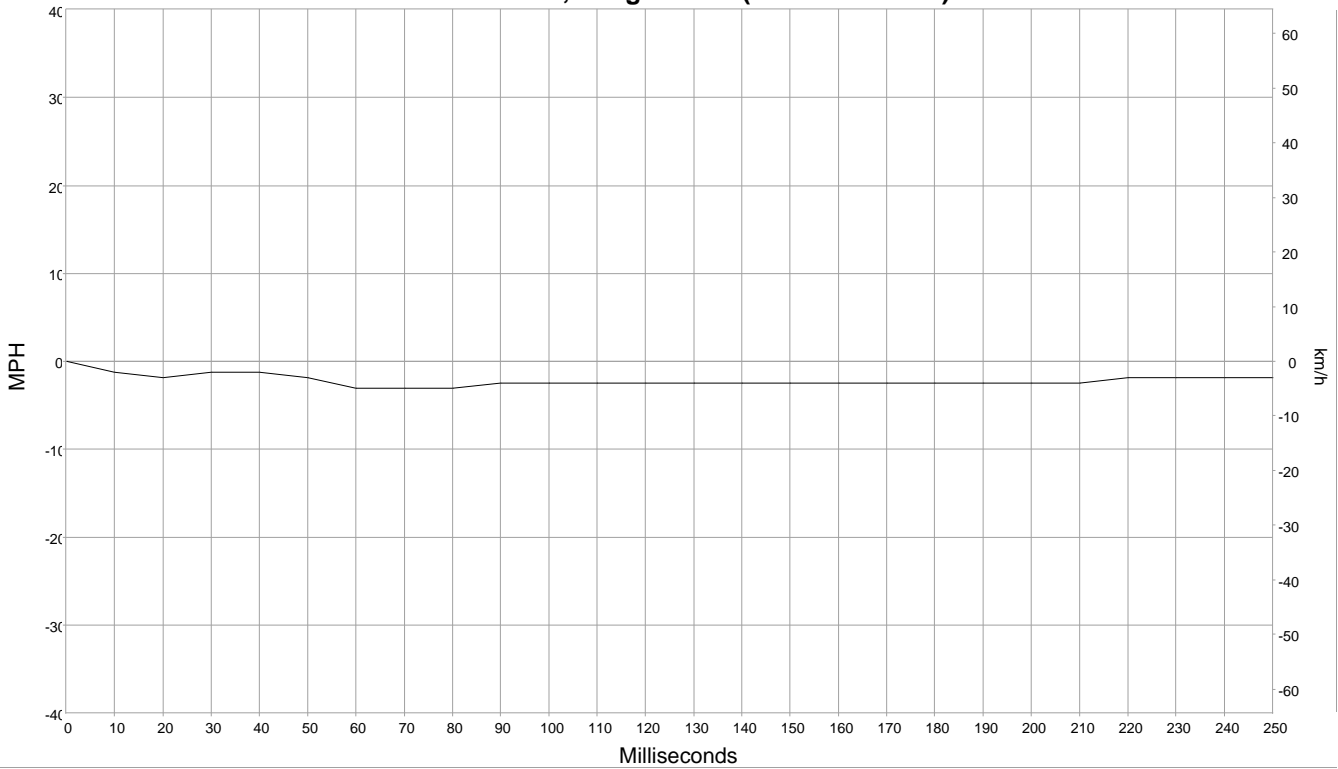
Longitudinal Delta V (Event Record 1)

Time (msec)	MPH [km/h]
0	0 [0]
10	-1 [-2]
20	-2 [-3]
30	-1 [-2]
40	-1 [-2]
50	-2 [-3]
60	-3 [-5]
70	-3 [-5]
80	-3 [-5]
90	-2 [-4]
100	-2 [-4]
110	-2 [-4]
120	-2 [-4]
130	-2 [-4]
140	-2 [-4]
150	-2 [-4]
160	-2 [-4]
170	-2 [-4]
180	-2 [-4]
190	-2 [-4]
200	-2 [-4]
210	-2 [-4]
220	-2 [-3]
230	-2 [-3]
240	-2 [-3]
250	-2 [-3]

Delta V, Lateral (Event Record 1)
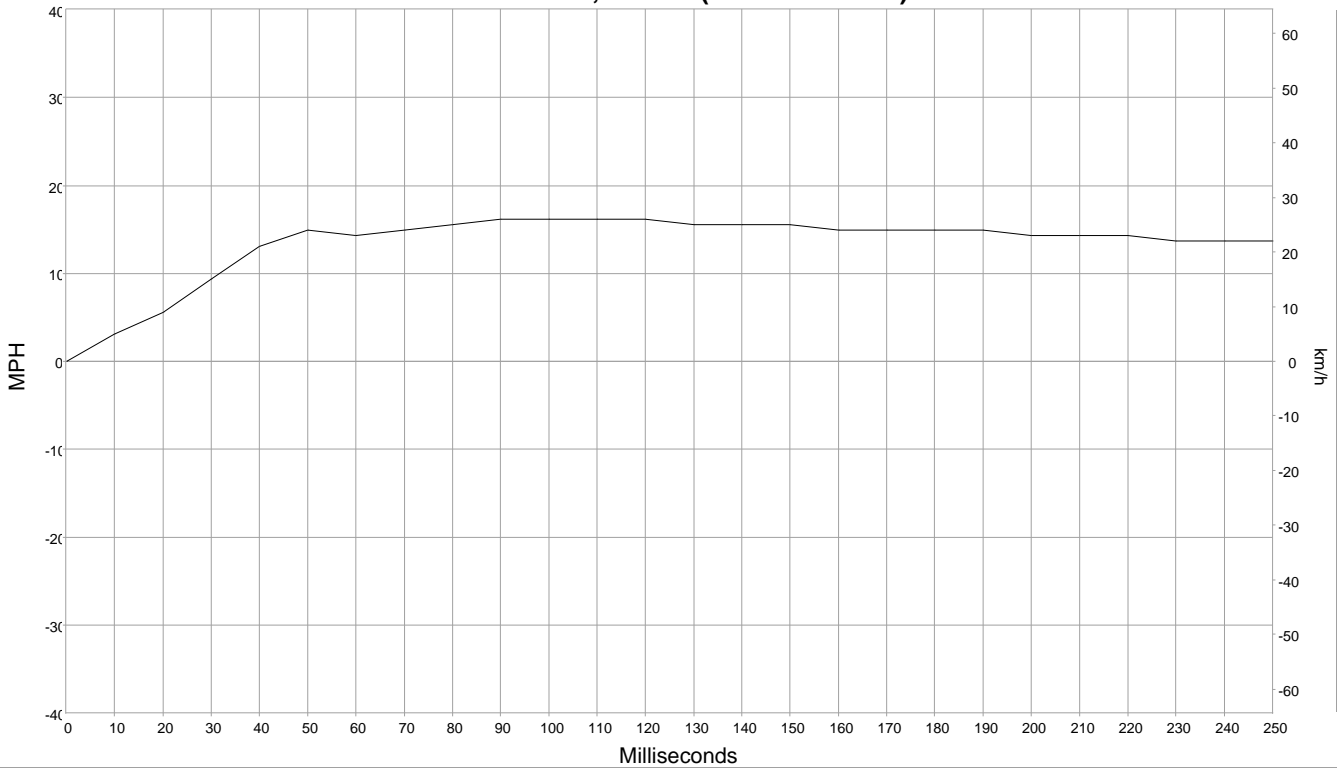
Lateral Delta V (Event Record 1)

Time (msec)	MPH [km/h]
0	0 [0]
10	3 [5]
20	6 [9]
30	9 [15]
40	13 [21]
50	15 [24]
60	14 [23]
70	15 [24]
80	16 [25]
90	16 [26]
100	16 [26]
110	16 [26]
120	16 [26]
130	16 [25]
140	16 [25]
150	16 [25]
160	15 [24]
170	15 [24]
180	15 [24]
190	15 [24]
200	14 [23]
210	14 [23]
220	14 [23]
230	14 [22]
240	14 [22]
250	14 [22]

Acceleration, Longitudinal (Event Record 1)
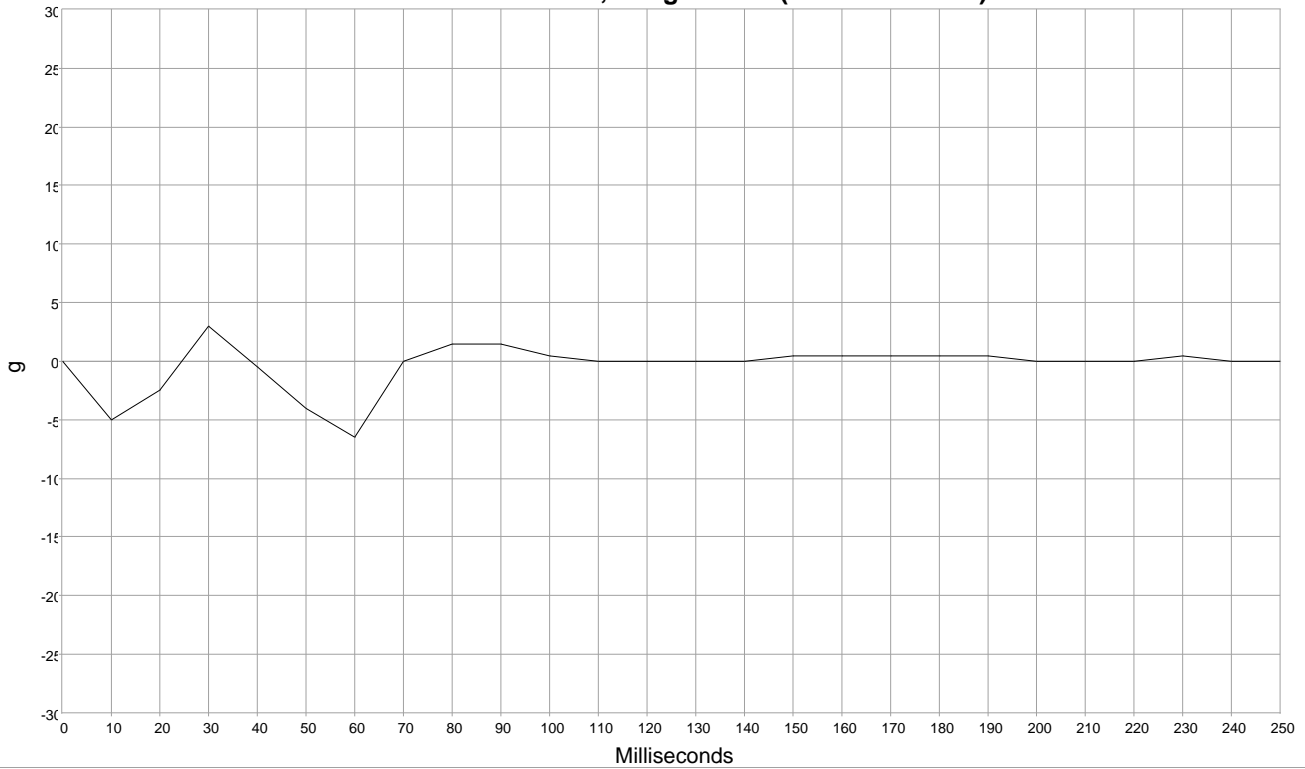
Longitudinal Acceleration (Event Record 1)

Time (msec)	g
0	0
10	-5
20	-2.5
30	3
40	-.5
50	-4
60	-6.5
70	0
80	1.5
90	1.5
100	.5
110	0
120	0
130	0
140	0
150	.5
160	.5
170	.5
180	.5
190	.5
200	0
210	0
220	0
230	.5
240	0
250	0

Acceleration, Lateral (Event Record 1)
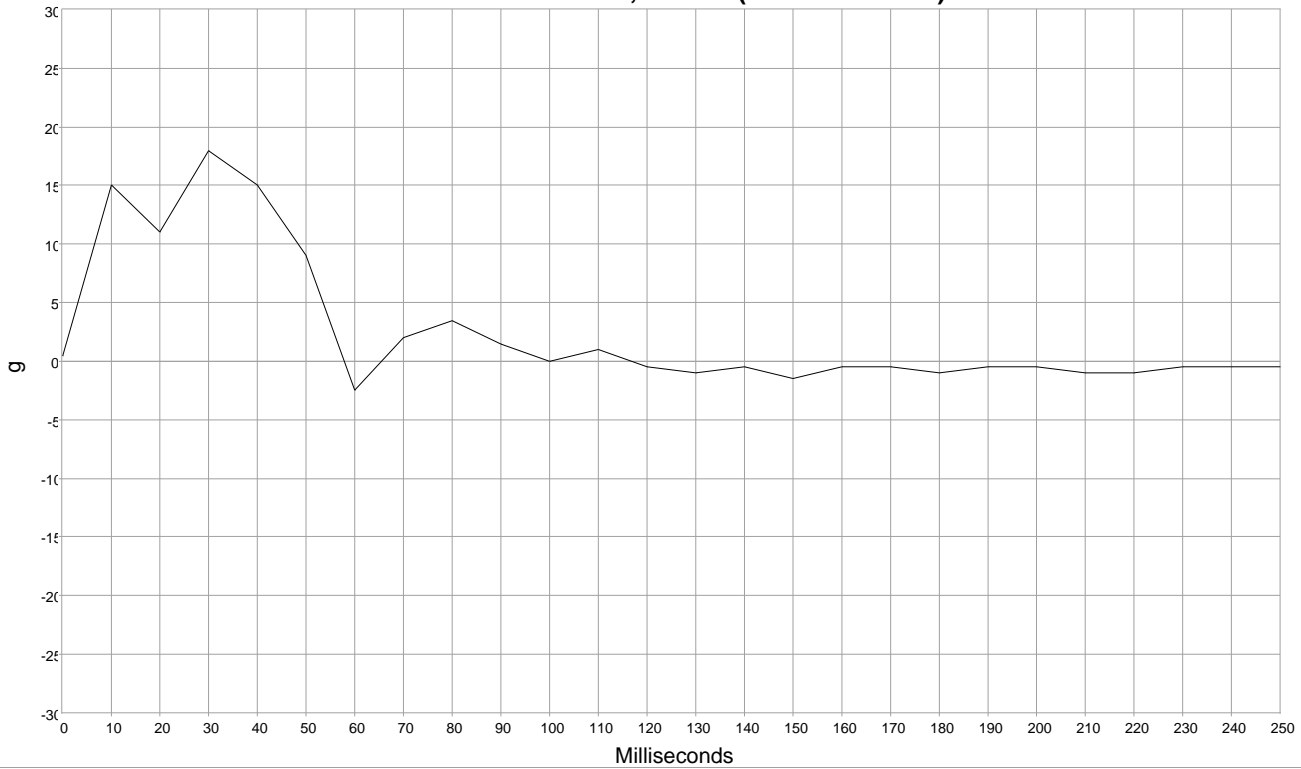
Lateral Acceleration (Event Record 1)

Time (msec)	g
0	.5
10	15
20	11
30	18
40	15
50	9
60	-2.5
70	2
80	3.5
90	1.5
100	0
110	1
120	-.5
130	-1
140	-.5
150	-1.5
160	-.5
170	-.5
180	-1
190	-.5
200	-.5
210	-1
220	-1
230	-.5
240	-.5
250	-.5

Hexadecimal Data

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61 03 10 FF 09 FF FF FF FF FF FF 00 FF FF 01 FF FF 01 02 01 FF FF 81 55 55 55 7C 7C 8C 8C 55 00
FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF 8E FF FF FF 8E
FF FF 8E FF FF FF FF 04 02 FF 02 FF FF FF 02 FF FF 02 0A FF 01 00 00 02 FF FF FF FF FF FF FF FF
FF FF FF FF FF FF FF

61 04 FF 37 00 00 00 00

61 06 FF C0 00 D2 00 56 00 96 00 86 00 17 00 23 00 73 00 78 01 52 01 59 00 31 00 36 00 41 00 46
00 51 00 81 FF

61 07 00 84 00 94 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 01 0C

61 19 00 00 80 00 00 00 80 00 00 00 80 00 00 00 40 00 00 00 40 00 00 00 40 00 00 00 80 00 00 00
80 00 00 19 00 00 00 05 00 00 FF FF CC CD 00 00 40 00 00 00 40 00 00 19 00 00

61 1A 00 FE FD FE FE FD FB FB FB FC FC FC FC FC FC FC FC FC FC FC FC FC FD FD FD FD FA 19 00 27
00 25 00 22 00 18 00 15 00 11 00 08 00 05 00 02 00 05 00 09 00 20 00 17 00 12 00 12 00 08 00 08
00 08 00 08 00 08 00 15 00 20 01 01 00 00 00 00 00 00 00 01 01 00 68 00 69 00 01 00 00 01 FF 00
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FE FF FF FF

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15 18 17 18 19 1A 1A 1A 1A 19 19 19 18 18 18 18 17 17 17 16 16 16 1A 2C 00 35 00 23 00 18 00 17
00 13 00 13 00 12 00 11 00 11 00 16 00 17

61 1C 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F
7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 00
10 00 01 FF F2 FF F9 FF FE FF FE 00 18 00 31 00 50 00 61 00 6D 29 0A 6E 09 00 00 00 00 00 00 00
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FF FF FF FF FF 00 00 15 00

61 1D 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F FF FF FF
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61 1E 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F
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61 1F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F
7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F 7F
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59 02 09 92 10 00 09 90 86 00 09 91 50 00 09 91 34 00 09 90 23 00 09 90 35 00 09 91 15 00 09 91
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29 00 09

59 02 09

59 0F 09 91 32 00 08 91 48 00 08
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