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## Vehicle Information

KM | OPTIMA(TF/QF) | 2013 | ALL | AIRBAG SYSTEM

## Additional Information

User : Richard R. Ruth, P.E.

CaseNumber : NHTSA 7347 MB0514 2011 Kia Optima Frontal

CrashDate :

Part No. : 95910 - 2T600

Save on : Saturday, April 20, 2013, at 22:51:45

G-EDR Software Version : 1.00

### EDR Data Limitations

The retrieval of his EDR data has authorized by the vehicle's owner, or other legal authority.

The airbag ECU can store up to two events. Deployment events cannot be overwritten or cleared from airbag ECU. Non-deployment events(which did not qualify as deployable events) can be overwritten by subsequent events.

The specifications for EDR are designed to be compatible with NHTSA 49 CFR Part 563 rule. The EDR data recording specifications of airbag ECU are divided into the following four categories.

- For the Event#1: Event#1-1 Event#1-2 Event#1-3 Real-Time Data.

- For the Event#2: Event#2-1 Event#2-2 Event#2-3 Real-Time Data.

The airbag ECU records data for all or some of the following crash(event)

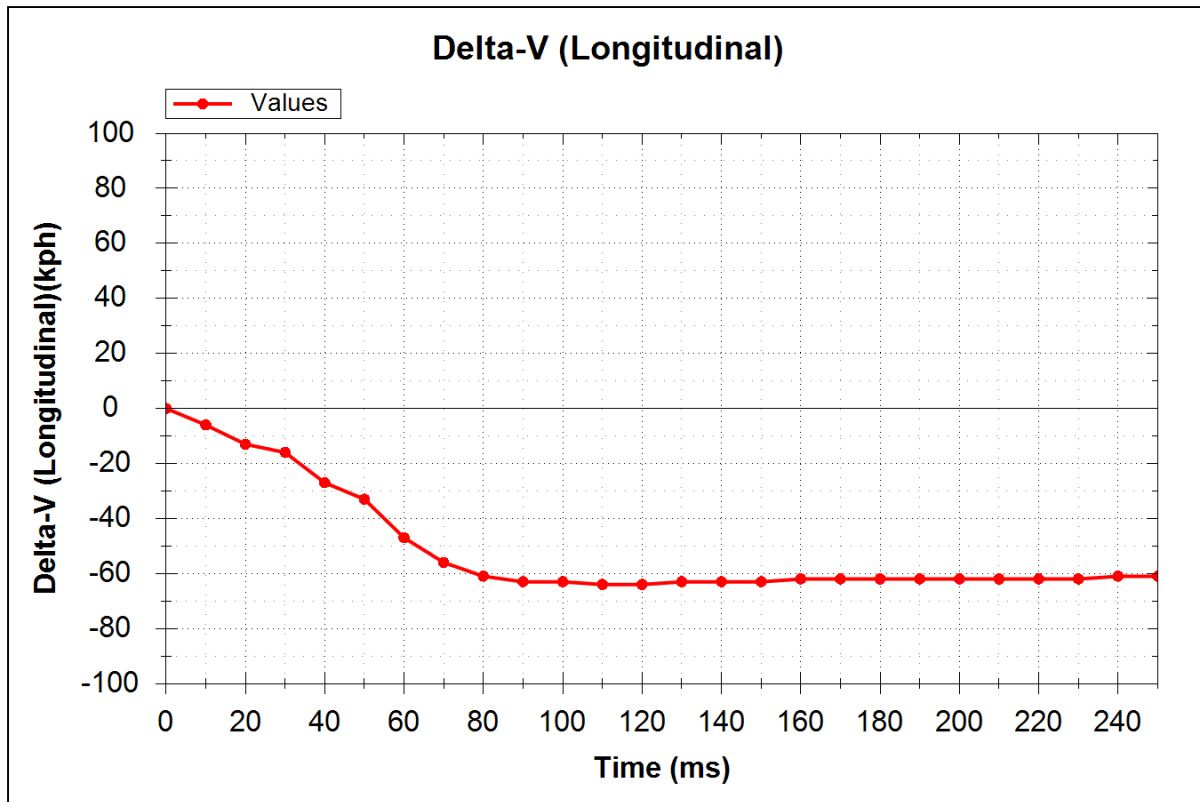
But, depending on the installed airbag ECU, data for side crash and/or rollover crash(event) may not be recored.

Ignition cycle counter(download) will increment by 1 every time when the power mode cycles is changed from OFF/Accessory to IGN/RUN or EDR data is downloaded by using the retrieval tool.

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# < Event # 1 - 1 >

# 1 [ Delta-V (Longitudinal) ]



Num	Time (ms)	Delta-V (Longitudinal) (kph)
1	0.0	0
2	10.0	-6
3	20.0	-13
4	30.0	-16
5	40.0	-27
6	50.0	-33
7	60.0	-47
8	70.0	-56
9	80.0	-61
10	90.0	-63
11	100.0	-63
12	110.0	-64
13	120.0	-64
14	130.0	-63
15	140.0	-63
16	150.0	-63
17	160.0	-62
18	170.0	-62
19	180.0	-62
20	190.0	-62

21	200.0	-62
22	210.0	-62
23	220.0	-62
24	230.0	-62
25	240.0	-61
26	250.0	-61

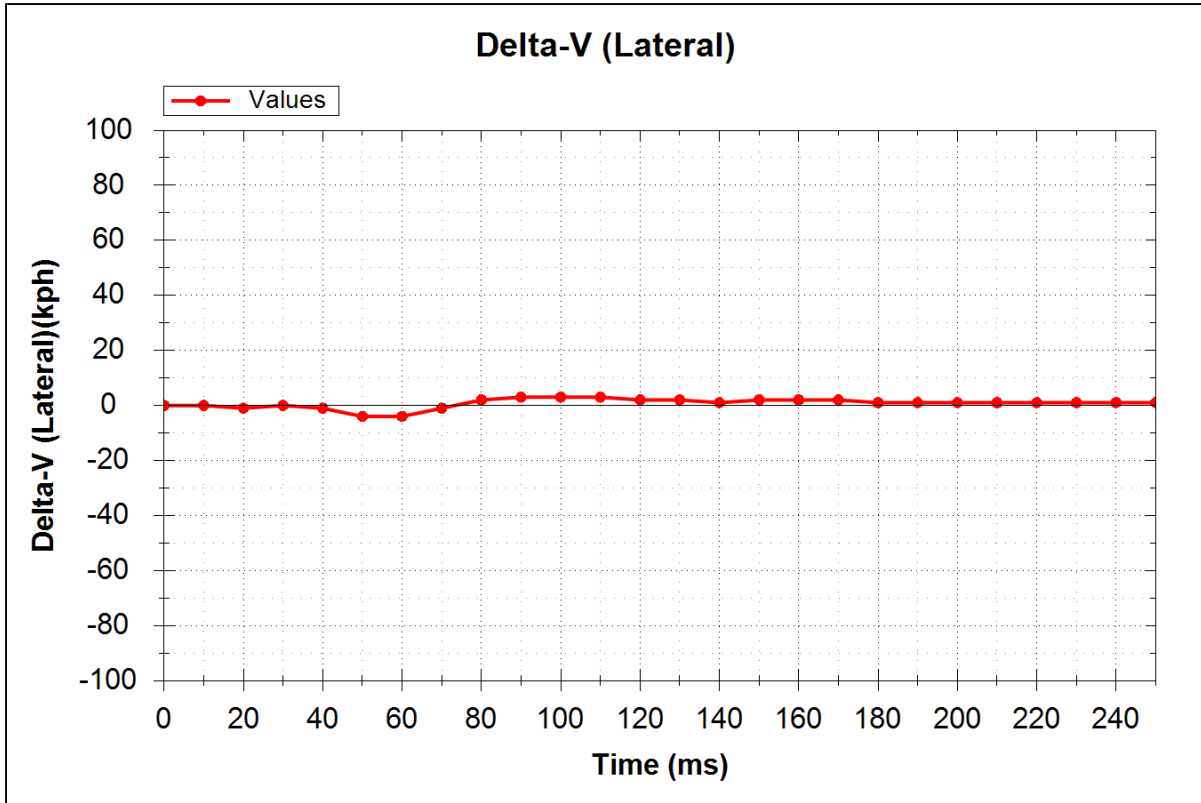
# 2 [ Max. Delta-V (Longitudinal) ]

Num	Max. Delta-V (Longitudinal) (kph)
1	-64

# 3 [ Time\_ Max. Delta-V (Longitudinal) ]

Num	Time_ Max. Delta-V (Longitudinal) (ms)
1	300.0

# 4 [ Delta-V (Lateral) ]



Num	Time (ms)	Delta-V (Lateral) (kph)
1	0.0	0
2	10.0	0
3	20.0	-1
4	30.0	0
5	40.0	-1
6	50.0	-4
7	60.0	-4
8	70.0	-1
9	80.0	2
10	90.0	3
11	100.0	3
12	110.0	3
13	120.0	2
14	130.0	2
15	140.0	1
16	150.0	2
17	160.0	2
18	170.0	2
19	180.0	1
20	190.0	1
21	200.0	1
22	210.0	1

23	220.0	1
24	230.0	1
25	240.0	1
26	250.0	1

# 5 [ Max. Delta-V (Lateral) ]

Num	Max. Delta-V (Lateral) (kph)
1	-5

# 6 [ Time\_ Max. Delta-V (Lateral) ]

Num	Time_ Max. Delta-V (Lateral) (ms)
1	300.0

# 7 [ Time\_ Max. Delta-V (Resultant) ]

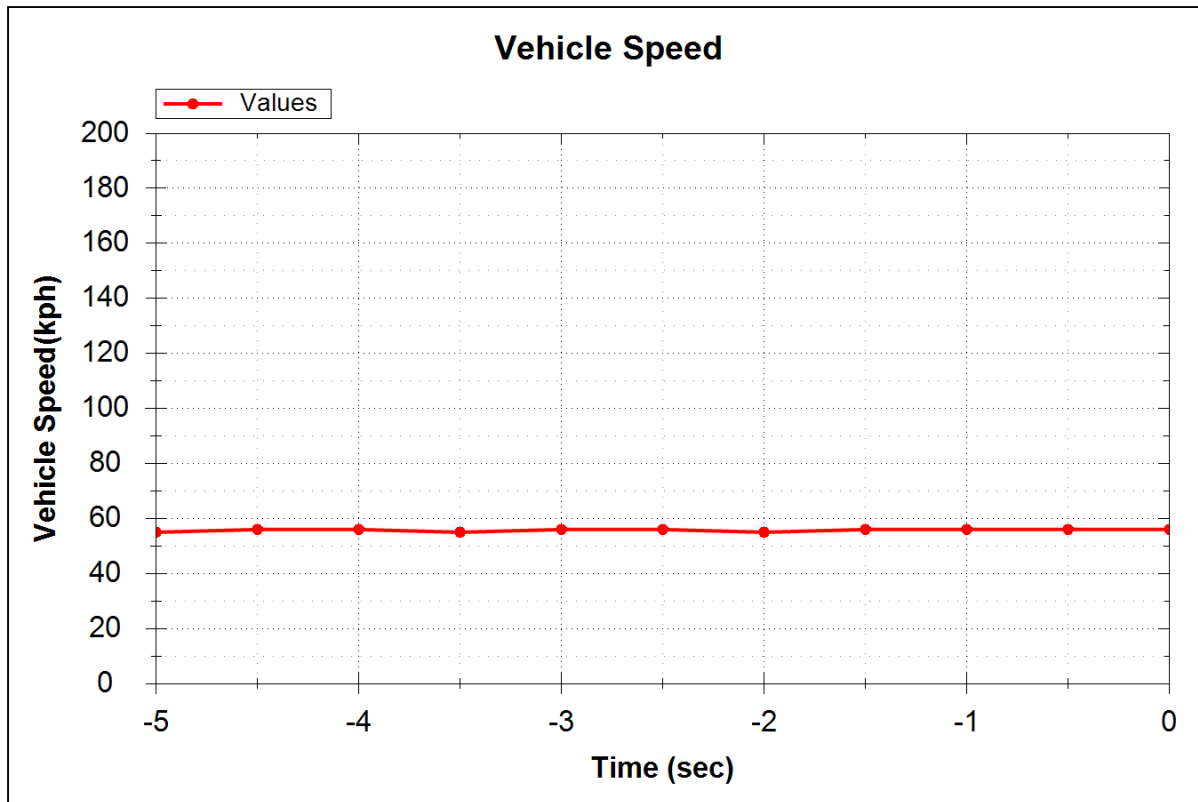
Num	Time_ Max. Delta-V (Resultant) (ms)
1	300.0

# 8 [ Vehicle roll angle ]

Not Supported...

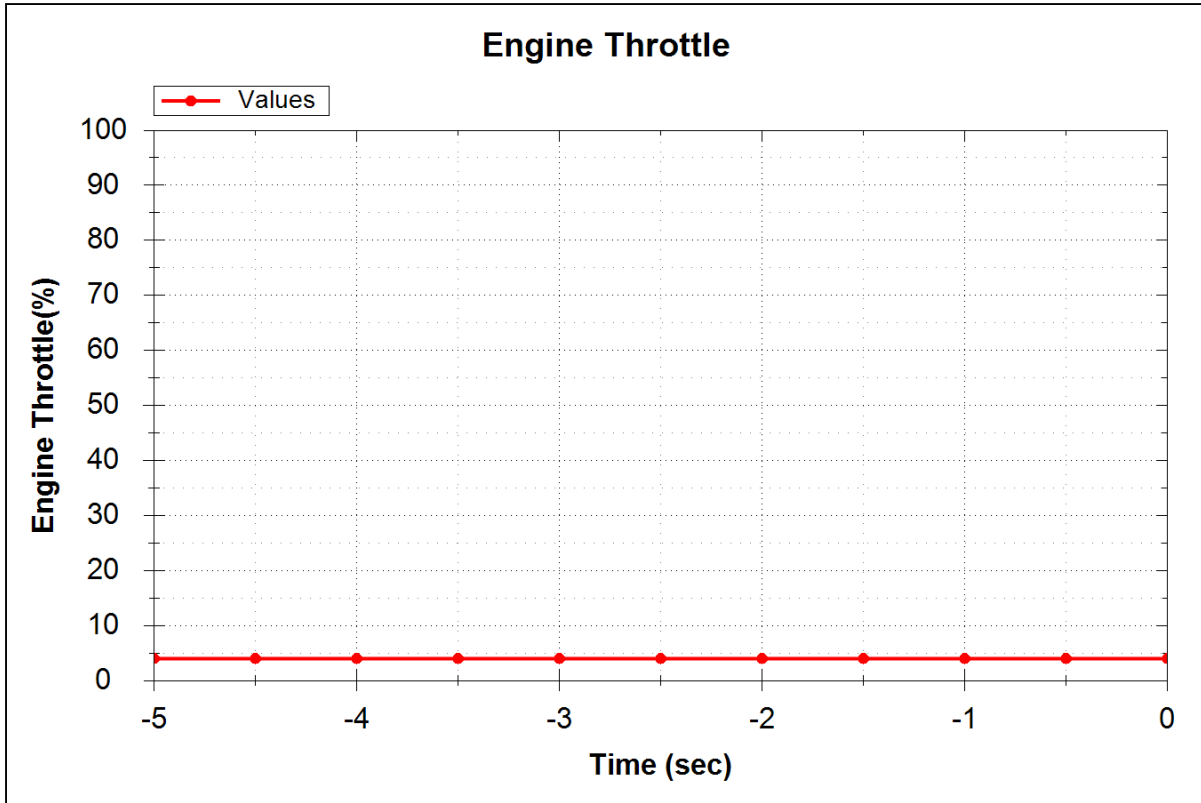
## < Event # 1 - 2 >

# 1 [ Vehicle Speed ]



Num	Time (sec)	Vehicle Speed (kph)
1	-5.0	55
2	-4.5	56
3	-4.0	56
4	-3.5	55
5	-3.0	56
6	-2.5	56
7	-2.0	55
8	-1.5	56
9	-1.0	56
10	-0.5	56
11	0.0	56

# 2 [ Engine Throttle ]



Num	Time (sec)	Engine Throttle (%)
1	-5.0	4
2	-4.5	4
3	-4.0	4
4	-3.5	4
5	-3.0	4
6	-2.5	4
7	-2.0	4
8	-1.5	4
9	-1.0	4
10	-0.5	4
11	0.0	4

# 3 [ Service brake\_ on/off ]

Num	Time (sec)	Service brake_ on/off
1	-5.0	OFF
2	-4.5	OFF
3	-4.0	OFF
4	-3.5	OFF

5	-3.0	OFF
6	-2.5	OFF
7	-2.0	OFF
8	-1.5	OFF
9	-1.0	OFF
10	-0.5	OFF
11	0.0	OFF

# 4 [ Ignition Cycle\_ Crash ]

Num	Ignition Cycle_ Crash (Cyc.)
1	63

# 5 [ Safety belt status\_ driver ]

Num	Safety belt status_ driver
1	ON

# 6 [ Airbag warning lamp on/off ]

Num	Airbag warning lamp on/off
1	OFF

# 7 [ Time to deploy\_ Frontal airbag-1st stage\_ driver ]

Num	Time to deploy_ Frontal airbag-1st stage_ driver (ms)
1	9

# 8 [ Time to deploy\_ Frontal airbag-1st stage\_ passenger ]

Num	Time to deploy_ Frontal airbag-1st stage_ passenger (ms)
1	9

# 9 [ Number of event ]

Num	Number of event
1	1 event

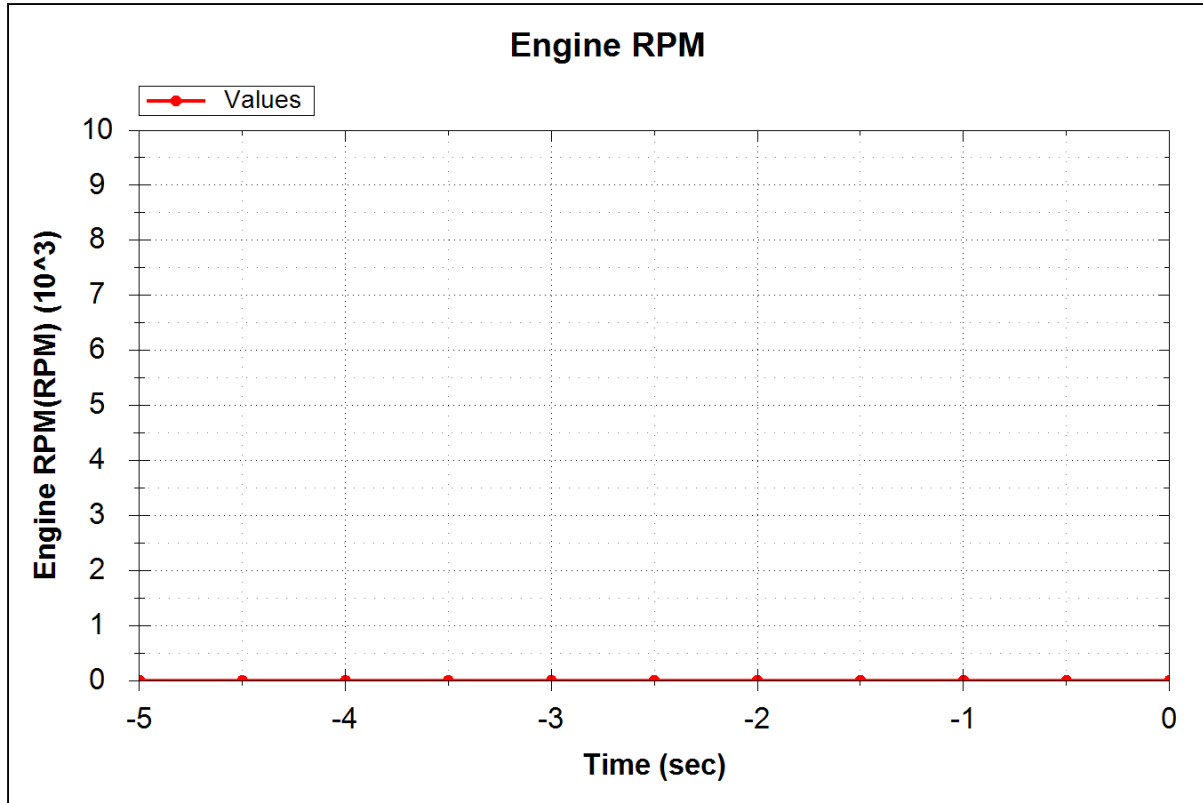
# 10 [ Time from Event 1 to 2 ]

Num	Time from Event 1 to 2 (ms)
1	0

# 11 [ Completed file recorded ]

Num	Completed file recorded
1	YES

# 12 [ Engine RPM ]



Num	Time (sec)	Engine RPM (RPM)
1	-5.0	0
2	-4.5	0
3	-4.0	0
4	-3.5	0
5	-3.0	0
6	-2.5	0
7	-2.0	0
8	-1.5	0
9	-1.0	0
10	-0.5	0
11	0.0	0

# 13 [ ABS activity ]

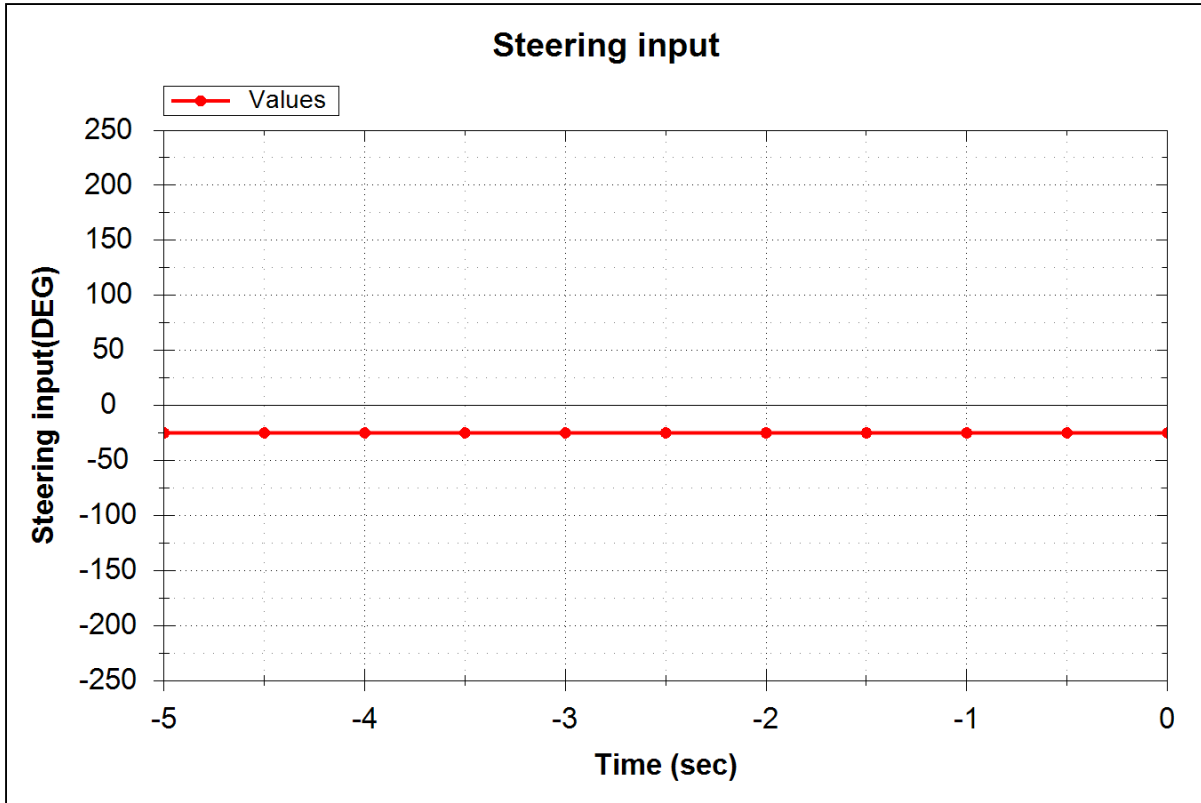
Num	Time (sec)	ABS activity
1	-5.0	OFF
2	-4.5	OFF
3	-4.0	OFF
4	-3.5	OFF

5	-3.0	OFF
6	-2.5	OFF
7	-2.0	OFF
8	-1.5	OFF
9	-1.0	OFF
10	-0.5	OFF
11	0.0	OFF

# 14 [ Stability control ]

Num	Time (sec)	Stability control
1	-5.0	ON
2	-4.5	ON
3	-4.0	ON
4	-3.5	ON
5	-3.0	ON
6	-2.5	ON
7	-2.0	ON
8	-1.5	ON
9	-1.0	ON
10	-0.5	ON
11	0.0	ON

# 15 [ Steering input ]



Num	Time (sec)	Steering input (DEG)
1	-5.0	-25
2	-4.5	-25
3	-4.0	-25
4	-3.5	-25
5	-3.0	-25
6	-2.5	-25
7	-2.0	-25
8	-1.5	-25
9	-1.0	-25
10	-0.5	-25
11	0.0	-25

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

# 16 [ Safety seat belt\_ passenger ]

Num	Safety seat belt_ passenger
1	ON

# 17 [ Seat track position switch\_ foremost\_ status\_ driver ]

Num	Seat track position switch_ foremost_ status_ driver
1	Not Supported

# 18 [ Seat track position switch\_ foremost\_ status\_ passenger ]

Num	Seat track position switch_ foremost_ status_ passenger
1	Not Supported

# 19 [ Occupant size(5th percentile female or larger) classification\_ driver ]

Num	Occupant size(5th percentile female or larger) classification_ driver
1	Not Supported

# 20 [ Occupant size(Child) classification\_ passenger ]

Num	Occupant size(Child) classification_ passenger
1	No

# 21 [ Time to deploy\_ Frontal airbag-2nd stage\_ driver ]

Num	Time to deploy_ Frontal airbag-2nd stage_ driver (ms)
1	14

# 22 [ Time to deploy\_ Frontal airbag-2nd stage\_ passenger ]

Num	Time to deploy_ Frontal airbag-2nd stage_ passenger (ms)
1	14

# 23 [ Time to deploy\_ side airbag\_ driver ]

Num	Time to deploy_ side airbag_ driver (ms)
1	0

# 24 [ Time to deploy\_ side airbag\_ passenger ]

Num	Time to deploy_ side airbag_ passenger (ms)
1	55

# 25 [ Time to deploy\_ curtain airbag\_ driver ]

Num	Time to deploy_ curtain airbag_ driver (ms)
1	0

# 26 [ Time to deploy\_ curtain airbag\_ passenger ]

Num	Time to deploy_ curtain airbag_ passenger (ms)
1	55

# 27 [ Time to fire\_ pretensioner\_ driver ]

Num	Time to fire_ pretensioner_ driver (ms)
1	9

# 28 [ Time to fire\_ pretensioner\_ passenger ]

Num	Time to fire_ pretensioner_ passenger (ms)
1	9

# 29 [ Frontal airbag deployment\_ Second stage disposal\_ driver ]

Num	Frontal airbag deployment_ Second stage disposal_ driver
1	NO

# 30 [ Frontal airbag deployment\_ Third stage disposal\_ driver ]

Num	Frontal airbag deployment_ Third stage disposal_ driver
1	NO

# 31 [ Frontal airbag deployment\_ Second stage disposal\_ right front passenger ]

Num	Frontal airbag deployment_ Second stage disposal_ right front passenger
1	NO

# 32 [ Frontal airbag deployment\_ Third stage disposal\_ right front passenger ]

Num	Frontal airbag deployment_ Third stage disposal_ right front passenger
1	NO

# 33 [ Time to deploy\_ Frontal airbag-3rd stage\_ driver ]

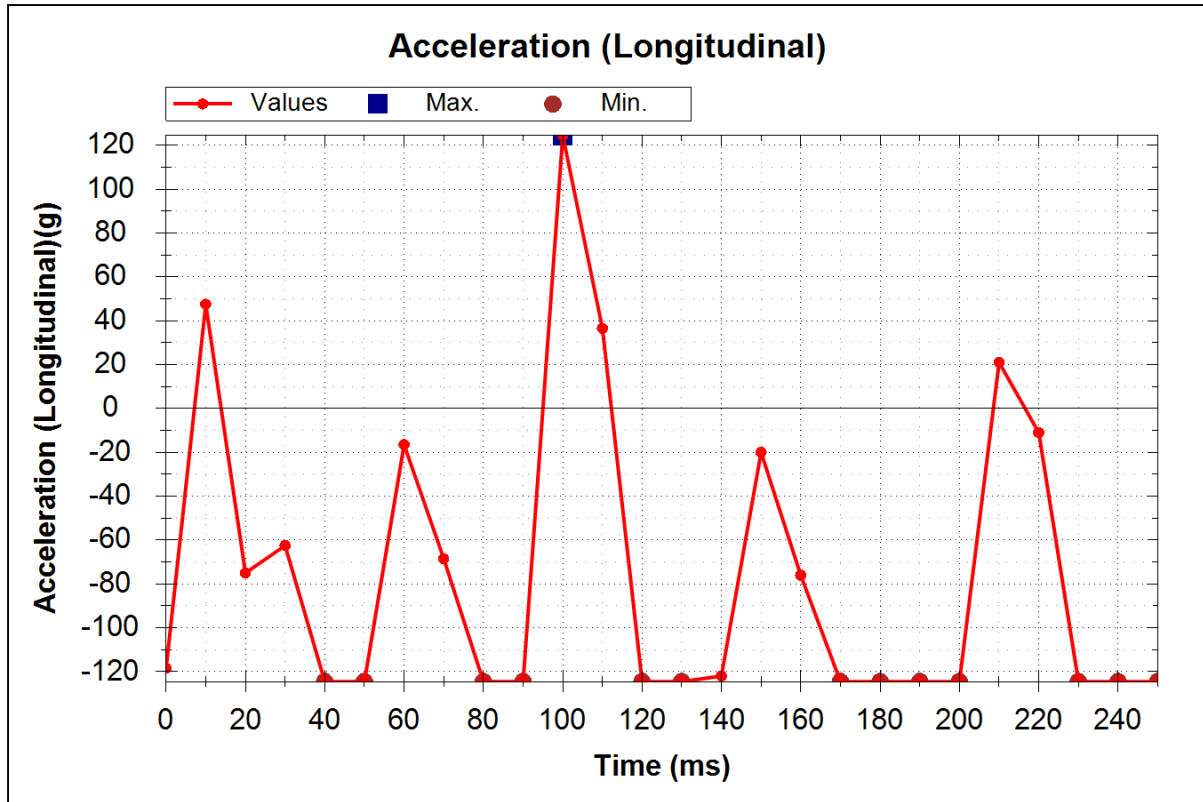
Not Supported...

# 34 [ Time to deploy\_ Frontal airbag-3rd stage\_ passenger ]

Not Supported...

# < Event # 1 - 3 >

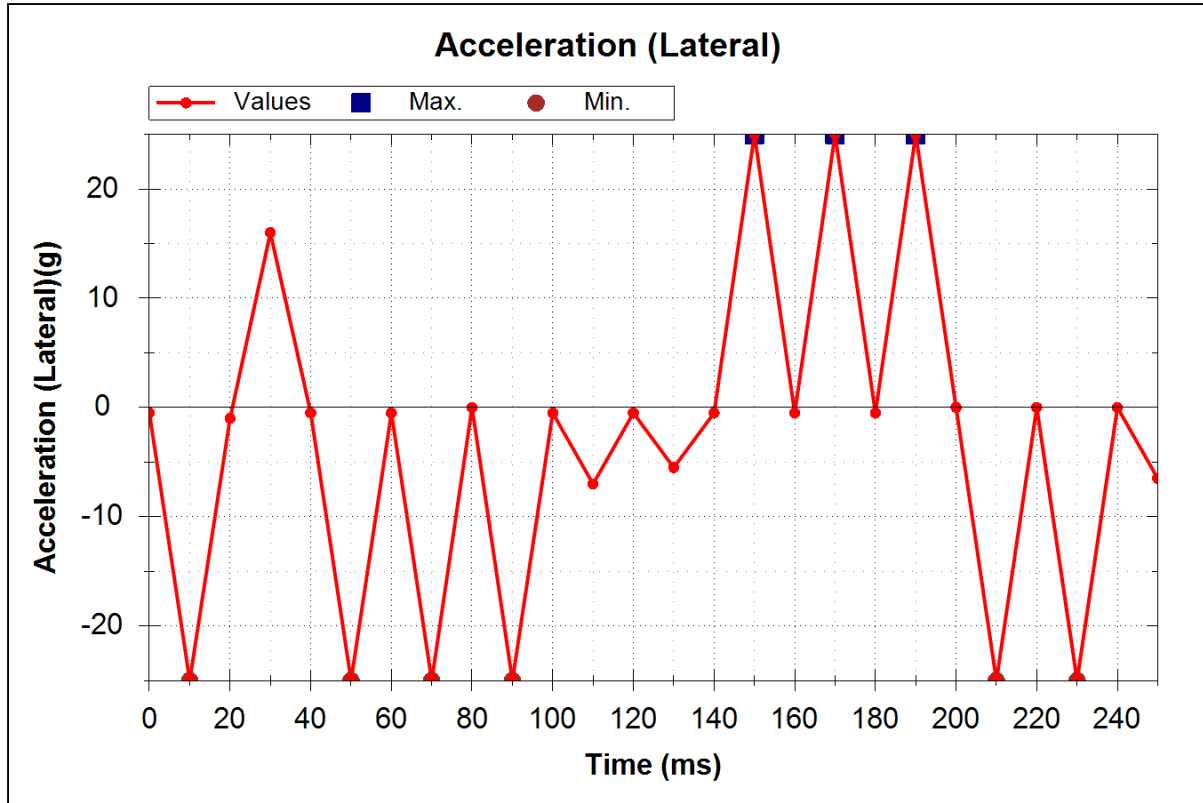
# 1 [ Acceleration (Longitudinal) ]



Num	Time (ms)	Acceleration (Longitudinal) (g)
1	0.0	-118.5
2	10.0	47.5
3	20.0	-75.0
4	30.0	-62.5
5	40.0	-124.5
6	50.0	-124.5
7	60.0	-16.5
8	70.0	-68.5
9	80.0	-124.5
10	90.0	-124.5
11	100.0	124.5
12	110.0	36.5
13	120.0	-124.5
14	130.0	-124.5
15	140.0	-122.0
16	150.0	-20.0
17	160.0	-76.0
18	170.0	-124.5
19	180.0	-124.5
20	190.0	-124.5

21	200.0	-124.5
22	210.0	21.0
23	220.0	-11.0
24	230.0	-124.5
25	240.0	-124.5
26	250.0	-124.5

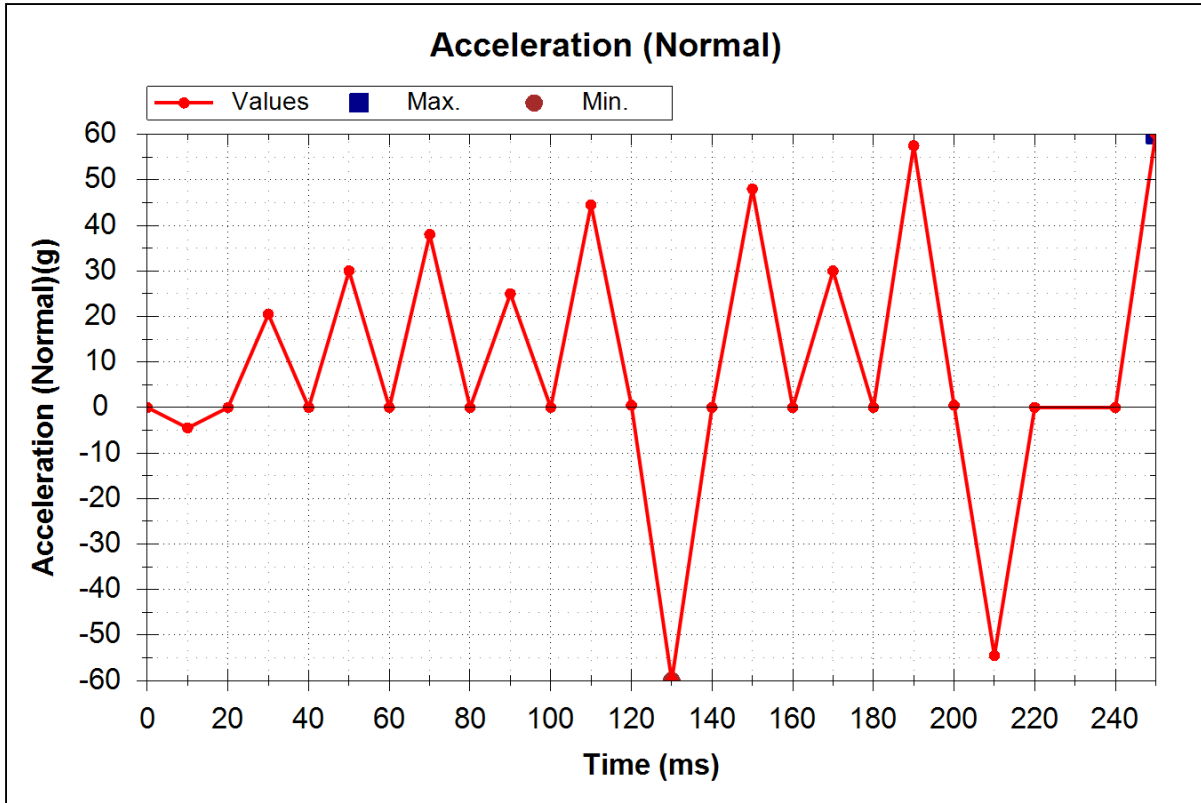
# 2 [ Acceleration (Lateral) ]



Num	Time (ms)	Acceleration (Lateral) (g)
1	0.0	-0.5
2	10.0	-25.0
3	20.0	-1.0
4	30.0	16.0
5	40.0	-0.5
6	50.0	-25.0
7	60.0	-0.5
8	70.0	-25.0
9	80.0	0.0
10	90.0	-25.0
11	100.0	-0.5
12	110.0	-7.0
13	120.0	-0.5
14	130.0	-5.5
15	140.0	-0.5
16	150.0	25.0
17	160.0	-0.5
18	170.0	25.0
19	180.0	-0.5
20	190.0	25.0
21	200.0	0.0
22	210.0	-25.0

23	220.0	0.0
24	230.0	-25.0
25	240.0	0.0
26	250.0	-6.5

# 3 [ Acceleration (Normal) ]



Num	Time (ms)	Acceleration (Normal) (g)
1	0.0	0.0
2	10.0	-4.5
3	20.0	0.0
4	30.0	20.5
5	40.0	0.0
6	50.0	30.0
7	60.0	0.0
8	70.0	38.0
9	80.0	0.0
10	90.0	25.0
11	100.0	0.0
12	110.0	44.5
13	120.0	0.5
14	130.0	-60.0
15	140.0	0.0
16	150.0	48.0
17	160.0	0.0
18	170.0	30.0
19	180.0	0.0
20	190.0	57.5
21	200.0	0.5
22	210.0	-54.5

23	220.0	0.0
24	230.0	Invalid
25	240.0	0.0
26	250.0	60.0

## < Real-time Data >

# 1 [ Ignition cycle\_download ]

Num	Ignition cycle_download (Cyc.)
1	Invalid

## < Event # 2 - 1 >

There is no recorded event.

## < Event # 2 - 2 >

There is no recorded event.

## < Event # 2 - 3 >

There is no recorded event.

## < Real-time Data >

# 1 [ Ignition cycle\_download ]

Num	Ignition cycle_download (Cyc.)
1	Invalid



## < Real-time Data >

07 DA 61 D0 FF FF 0F 00 7D C5 FA FF FF FF FF FF FF FF FF 00 00 FF FF FF FF 00 00 FF FF

## < Event # 2 - 1 >

There is no recorded event.

## < Event # 2 - 2 >

There is no recorded event.

## < Event # 2 - 3 >

There is no recorded event.

## < Real-time Data >

07 DA 61 D0 FF FF 0F 00 7D C5 FA FF FF FF FF FF FF FF FF 00 00 FF FF FF FF 00 00 FF FF