

# TECHNICAL RECONSTRUCTION ATTACHMENT

### 2016 Ford Fusion EDR Report

# Phoenix, Arizona

# HWY21MH008

(32 pages)



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.

<u>CD</u>	R File	<u>Infor</u>	rmation

User Entered VIN	3FA6P0H73GR
User	S. O'Bryant #5501
Case Number	121031311
EDR Data Imaging Date	07/08/2021
Crash Date	06/09/2021
Filename	3FA6P0H73GR ACM.CDRX
Saved on	Thursday, July 8 2021 at 10:57:24
Imaged with CDR version	Crash Data Retrieval Tool 21.1.1
Imaged with Software Licensed to (Company Name)	Arizona DPS
Reported with CDR version	Crash Data Retrieval Tool 21.1.1
Reported with Software Licensed to (Company Name)	Arizona DPS
EDR Device Type	Airbag Control Module
ACM Adapter Detected During Download	Yes
Event(s) recovered	locked side event

#### Comments

Image Authority: Warrant #SW2021-081887

Type of image: Direct to module

Power supply: 110 to adapter

Vehicle Cable Used: F00K108783

Adapter Used (if any): F00K108387, Serial to USB Adapter

Tires on Vehicle: All 225/55R17

Recommended Tire Size: Module only

People present: S. O'Bryant #5501, T Petersen #7075

Other notes as appropriate: 2016 Ford Fusion

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 Thursday, July 8 2021 at 10:57:24.

#### **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. <u>Airbag deployment event</u> 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 3FA6P0H73GR Page 1 of 31 Printed on: Thursday, July 8 2021 at 10:59 01



#### must be replaced.

3. Some RCM may also categorize <u>Non airbag deployment event</u>. This type is an event in which non airbag devices such as pretentioners, 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**

<u>Event(s) recovered</u> 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**

- <u>Complete file recorded</u> indicates if data from the recorded event has been fully written to the RCM memory.
- If the RCM detected a <u>peripheral crash sensor was lost during an event</u>, 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, <u>the deployment device(s)</u> 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.
- <u>Stability Control Lateral Acceleration</u> if Applicable: Lateral Acceleration (Y-direction) is the acceleration along the lateral axis of the vehicle, reported as positive when accelerating to the left.
- <u>Stability Control Longitudinal Acceleration</u> 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.
- <u>Stability Control Yaw Rate</u> 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.
- <u>Stability Control Roll Rate</u> 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

 <u>Delta-V</u>, 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)

• <u>Vehicle roll angle if applicable:</u> 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... Theses modules communicate to the RCM via Vehicle Communication Network. The RCM stores the received data internally.



02011\_RCM-AB10P\_r001





#### System Status at Time of Retrieval

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VIN As Programmed into RCM at Factory	3FA6P0H73GR
Current VIN from PCM	3FA6P0H73GR
Ignition Cycle, Download (First Record)	10,524
Ignition Cycle, Download (Second Record)	10,524
Restraints Control Module Part Number	ES7T-14B321-AA
Restraints Control Module Serial Number	002494734248
Restraints Control Module Software Part Number (Version)	DS7T-14C028-CA
Restraints Control Module Calibration Part Number (Version)	ES7T-14C098-JA
Software Strategy Part Number (2)	N/A
Driver Side/Center Frontal Restraints Sensor Serial Number	1C28CB5D6E29
Driver, Row 1, Side Restraint Sensor 1 Serial Number	BD1CE3712516
Driver, Row 2, Side Restraint Sensor 2 Serial Number	1C28CB5D5B42
Passenger Frontal Restraints Sensor Serial Number	1E28CB5D4A1A
Passenger, Row 1, Side Restraint Sensor 1 Serial Number	A91CCF732802
Passenger, Row 2, Side Restraint Sensor 2 Serial Number	1C28CC2C3848
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)	N/A
Lifetime Operating Timer at Event Time Zero (sec)	11,963,641
Key-On Timer at Event Time Zero (sec)	1,112
Vehicle Voltage at Time Zero (V)	13.79
Energy Reserve Mode Entered During Event (Yes, No)	Yes
Time Front Passenger Restraint Sensor Lost Relative to Time Zero (msec)	255
Time Row 2 Driver Side Restraint Sensor Lost Relative to Time Zero (msec)	85
Time Row 2 Passenger Side Restraint Sensor Lost Relative to Time Zero (msec)	498
Time Row 1 Driver Side Restraint Sensor Lost Relative to Time zero (msec)	498
Time Row 1 Passenger Side Restraint Sensor Lost Relative to Time Zero (msec)	96



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)	241.0
Frontal Airbag Deployment, Time to First Stage Deployment, Front Passenger (msec)	241.0
Frontal Airbag Deployment, Time to 2nd Stage, Driver (msec)	246.0
Frontal Airbag Deployment, Time to 2nd Stage, Front Passenger (msec)	246.0
Pretensioner (Retractor) Deployment, Time to Fire, Driver (msec)	34.5
Pretensioner (Retractor) Deployment, Time to Fire, Right Front Passenger (msec)	34.5
Side (Thorax) Air Bag Deployment, Time to Deploy, Driver (msec)	34.5
Side Curtain Airbag Deployment, Time to Deploy, Driver Side (msec)	34.5
Adaptive Steering Column Deployment, Time to Deploy, Driver (msec)	241.0
Inflatable Knee Bolster Deployment, Time to Fire, Driver (msec)	241.0
Inflatable Knee Bolster Deployment, Time to Fire, Passenger (msec)	241.0
Cannister Vent Deployment, Time to Fire, Passenger (msec)	281.0
Pretensioner (Anchor) Deployment, Time to Fire, Driver (msec)	39.5
Pretensioner (Anchor) Deployment, Time to Fire, Right Front Passenger (msec)	39.5
Maximum Delta-V, Longitudinal (MPH [km/h])	62.1 [100]
Time, Maximum Delta-V Longitudinal (msec)	200
Driver Row 3. Side Sensor, Discriminating Deployment	Yes
Driver Row 3. Side Sensor. Safing	Yes
Passenger Row 3, Side Sensor, Safing	Yes
RCM, Side Driver (Lateral), Safing	Yes
RCM Side Passenger (Lateral), Safing	Yes
Driver or Center, Front Satellite Sensor, Safing	Yes
Passenger, Front Satellite Sensor, Safing	Yes
RCM Front (Longitudinal), Discriminating Deployment	Yes
RCM Front(Longitudinal). Safing	Yes



### Pre-Crash Data -1 sec (First Record)

Ignition cycle, Crash	10,523
Frontal Air Bag Warning Lamp, On/Off	Off
Occupant Size Classification. Front Passenger (Child size Yes/No [Hex value])	No [\$02]
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	Off
ABS Telltale	Off
ESC/TC Telltale	Off
ESC/TC Off Telltale	Off
Speed Control Telltale	Off
Powertrain Wrench Telltale	Off
Powertrain Malfunction Indicator Lamp (MIL) Telltale	Off

# BOSCH

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	Traction Control via Brakes	Wheel Torque (N-m)	Driver Gear Select (Auto Trans)
- 5.0	0.0 [0.0]	ОК	0.0	ОК	On	ОК	764	non- engaged	No	Inactive	236	Drive
- 4.5	0.0 [0.0]	ОК	0.0	ОК	On	ОК	762	non- engaged	No	Inactive	264	Drive
- 4.0	0.0 [0.0]	ОК	0.0	ОК	On	ОК	760	non- engaged	No	Inactive	292	Drive
- 3.5	0.0 [0.0]	ОК	0.0	ОК	On	ОК	768	non- engaged	No	Inactive	268	Drive
- 3.0	0.0 [0.0]	ОК	0.0	ОК	On	ОК	760	non- engaged	No	Inactive	300	Drive
- 2.5	0.0 [0.0]	ОК	0.0	ОК	On	ОК	762	non- engaged	No	Inactive	288	Drive
- 2.0	0.0 [0.0]	ОК	0.0	ОК	On	ОК	758	non- engaged	No	Inactive	308	Drive
- 1.5	0.0 [0.0]	ОК	0.0	ОК	On	ОК	762	non- engaged	No	Inactive	304	Drive
- 1.0	0.0 [0.0]	ОК	0.0	ОК	On	ОК	766	non- engaged	No	Inactive	276	Drive
- 0.5	0.0 [0.0]	ОК	0.0	ОК	On	ОК	758	non- engaged	No	Inactive	344	Drive
0.0	0.0 [0.0]	ОК	0.0	ОК	On	ОК	766	non- engaged	No	Inactive	416	Drive

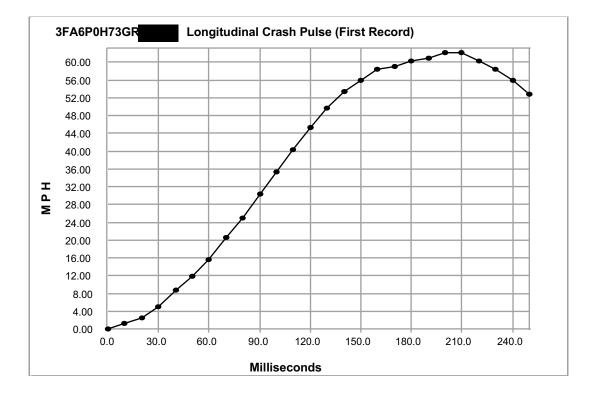
### Pre-Crash Data -5 to 0 sec [2 samples/sec] (First Record)



	Stability	Stability		ec] (First R	
	Control	Control	Stability	Stability	Steering
Time	Lateral	Longitudinal	Control Yaw	Control Roll	Wheel Angle
(sec)					
. ,	Acceleration	Acceleration	Rate (deg/sec)	Rate (deg/sec)	(deg)
	(g)	(g)			
- 5.0	-0.01	0.00	-0.20	0.00	0.6
- 4.9	-0.02	-0.01	-0.21	0.00	0.6
- 4.8	-0.01	0.00	-0.24	0.00	0.6
- 4.7	-0.02	0.00	-0.18	0.00	0.6
- 4.6	-0.01	0.00	-0.23	0.00	0.6
- 4.5	-0.01	-0.01	-0.20	0.00	0.6
- 4.4	-0.01	0.00	-0.22	0.00	0.6
- 4.3	-0.01	0.00	-0.22	0.00	0.6
- 4.2	-0.01	0.00	-0.23	0.00	0.6
- 4.1	-0.02	0.00	-0.22	0.00	0.6
- 4.0	-0.01	0.00	-0.19	0.00	0.6
- 3.9	-0.01	0.00	-0.23	0.00	0.6
- 3.8	-0.01	0.00	-0.24	0.00	0.6
- 3.7	-0.01	0.00	-0.24	0.00	0.6
- 3.6	-0.02	0.00	-0.22	0.00	0.6
- 3.5	-0.01	0.00	-0.22	0.00	0.6
- 3.4	-0.01	0.00	-0.22	0.00	0.6
- 3.3	-0.01	0.00	-0.20	0.00	0.6
- 3.2	-0.01	0.00	-0.19	0.00	0.7
- 3.1	-0.02	0.00	-0.21	0.00	0.0
- 3.0	-0.01	0.00	-0.21	0.00	0.4
- 2.9	-0.01	0.00	-0.20	0.00	0.7
- 2.8	-0.01	0.00	-0.22	0.00	0.7
- 2.7	-0.02	-0.01	-0.22	0.00	0.7
- 2.6	-0.02	0.00	-0.21	0.00	0.7
- 2.5	-0.01	-0.01	-0.23	0.00	0.6
- 2.3 - 2.4	-0.02	0.00	-0.26	0.00	0.6
- 2.4	-0.02	0.00	-0.20	0.00	0.0
- 2.2	-0.02	0.00	-0.21	0.00	0.3
- 2.2	-0.02	0.00	-0.21	0.00	0.0
- 2.0	-0.01	0.00	-0.21	0.00	0.0
- <u>2.0</u> - 1.9	-0.02	0.00	-0.22	0.00	-0.1
<u>- 1.8</u> - 1.7	-0.01	0.00	-0.22	0.00	0.0
	-0.01	0.00	-0.20	0.00	0.0
- 1.6	-0.02	0.00	-0.22	0.00	0.0
- 1.5	-0.01	0.00	-0.24	0.00	-0.1
- 1.4	-0.01	0.00	-0.23	0.00	-0.1
- 1.3	-0.01	0.00	-0.17	0.00	-0.1
- 1.2	-0.01	0.00	-0.24	0.00	-0.2
- 1.1	-0.01	0.00	-0.17	0.00	-0.7
- 1.0	-0.01	0.00	-0.25	0.00	0.9
- 0.9	-0.02	0.00	-0.18	0.00	0.9
- 0.8	-0.01	0.00	-0.25	0.00	1.0
- 0.7	-0.01	-0.01	-0.23	0.00	1.2
- 0.6	-0.01	0.00	-0.20	0.00	1.2
- 0.5	-0.02	0.00	-0.26	0.00	1.2
- 0.4	-0.01	0.00	-0.20	0.00	1.2
- 0.3	-0.01	-0.01	-0.21	0.00	0.7
- 0.2	-0.01	0.00	-0.25	0.00	2.4
- 0.1	-0.02	0.00	-0.22	0.00	1.7
0.0	-0.01	-0.01	-0.15	0.00	4.2

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

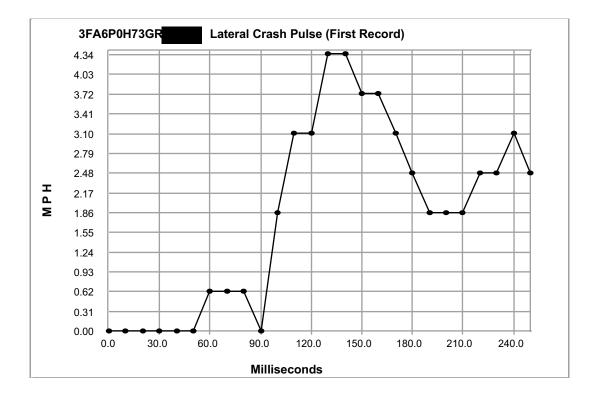




### Longitudinal Crash Pulse (First Record)

Time (msec)	Delta-V, longitudinal (MPH)	Delta-V, longitudinal (km/h)
0	0.0	0
10	1.2	2
20	2.5	4
30	5.0	8
40	8.7	14
50	11.8	19
60	15.5	25
70	20.5	33
80	24.9	40
90	30.4	49
100	35.4	57
110	40.4	65
120	45.4	73
130	49.7	80
140	53.4	86
150	55.9	90
160	58.4	94
170	59.0	95
180	60.3	97
190	60.9	98
200	62.1	100
210	62.1	100
220	60.3	97
230	58.4	94
240	55.9	90
250	52.8	85



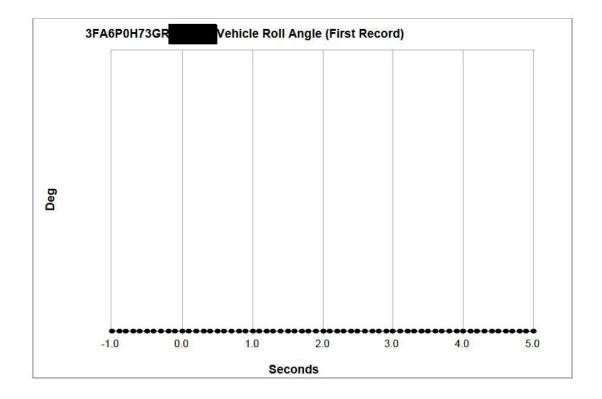


### Lateral Crash Pulse (First Record)

Time (msec)	Delta-V, lateral (MPH)	Delta-V, lateral (km/h)
0	0.0	0
10	0.0	0
20	0.0	0
30	0.0	0
40	0.0	0
50	0.0	0
60	0.6	1
70	0.6	1
80	0.6	1
90	0.0	0
100	1.9	3
110	3.1	5
120	3.1	5
130	4.3	7
140	4.3	7
150	3.7	6
160	3.7	6
170	3.1	5
180	2.5	4
190	1.9	3
200	1.9	3
210	1.9	3
220	2.5	4
230	2.5	4
240	3.1	5
250	2.5	4







# Vehicle Roll Angle (First Record)

Time (sec)	Vehicle Roll Angle (deg)
-1.0	0.0
-0.9	0.0
-0.8	0.0
-0.7	0.0
-0.6	0.0
-0.5	0.0
-0.4	0.0
-0.3	0.0
-0.2	0.0
-0.1	0.0
0.0	0.0
0.1	0.0
0.2	0.0
0.3	0.0
0.4	0.0
0.5	0.0
0.6	0.0
0.7	0.0
0.8	0.0
0.9	0.0
1.0	0.0
1.1	0.0
1.2	0.0
1.3	0.0
1.4	0.0
1.5	0.0
1.6	0.0
1.7	0.0
1.8	0.0

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1.9	0.0
2.0	0.0
2.1	0.0
2.2	0.0
2.3	
2.4	0.0
2.0 2.1 2.2 2.3 2.4 2.5	0.0
2.6 2.7	0.0
2.7	0.0
2.8	0.0
2.8 2.9	0.0
3.0 3.1 3.2	0.0
3.1	0.0
3.2	0.0
3.3	0.0
3.4	0.0
3.5	0.0
3.6	0.0
3.7	0.0
3.8	0.0
3.9	0.0
4.0	0.0
4.1	0.0
4.2	0.0
4.3	0.0
4.4	0.0
4.5	0.0
$\begin{array}{r} 3.3 \\ 3.4 \\ 3.5 \\ 3.6 \\ 3.7 \\ 3.8 \\ 3.9 \\ 4.0 \\ 4.1 \\ 4.2 \\ 4.3 \\ 4.4 \\ 4.5 \\ 4.6 \\ 4.7 \end{array}$	0.0
4.7	0.0
4.8 4.9 5.0	0.0
4.9	0.0
5.0	0.0



### System Status at Event (Second Record)

Complete File Recorded (Yes.No)	Yes
Multi-Event, Number of Events	2
Time From Event 1 to 2 (msec)	676
Lifetime Operating Timer at Event Time Zero (sec)	11.963.642
Key-On Timer at Event Time Zero (sec)	1,113
Vehicle Voltage at Time Zero (V)	0.25
Energy Reserve Mode Entered During Event (Yes, No)	Yes
Time Front Passenger Restraint Sensor Lost Relative to Time Zero (msec)	Data lost prior to event
Time Row 2 Driver Side Restraint Sensor Lost Relative to Time Zero (msec)	Data lost prior to event
Time Row 2 Passenger Side Restraint Sensor Lost Relative to Time Zero (msec)	Data lost prior to event
Time Row 1 Driver Side Restraint Sensor Lost Relative to Time zero (msec)	Data lost prior to event
Time Row 1 Passenger Side Restraint Sensor Lost Relative to Time Zero (msec)	Data lost prior to event



# Faults Present at Start of Event (Second Record)

31193-00	
30072-13	
31415-81	
31417-81	
31419-81	
30001-11	
30010-13	

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#### Deployment Data (Second Record)

Maximum Delta-V, Longitudinal (MPH [km/h])	8.7 [14]
Time, Maximum Delta-V Longitudinal (msec)	280
RCM. Side Driver (Lateral). Safing	Yes
RCM Side Passenger (Lateral), Safing	Yes



## Pre-Crash Data -1 sec (Second Record)

Ignition cycle, Crash	10,523
Frontal Air Bag Warning Lamp, On/Off	On
Occupant Size Classification. Front Passenger (Child size Yes/No [Hex value])	No [\$02]
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	Off
ABS Telltale	Off
ESC/TC Telltale	Off
ESC/TC Off Telltale	Off
Speed Control Telltale	Off
Powertrain Wrench Telltale	Off
Powertrain Malfunction Indicator Lamp (MIL) Telltale	Off

# BOSCH

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	Traction Control via Brakes	Wheel Torque (N-m)	Driver Gear Select (Auto Trans)
- 5.0	10.7 [17.2]	ОК	0.0	ОК	Off	ОК	272	non- engaged	No	Inactive	-308	Drive
- 4.5	10.7 [17.2]	ОК	0.0	ОК	Off	ОК	272	non- engaged	No	Inactive	-308	Drive
- 4.0	10.7 [17.2]	ОК	0.0	ОК	Off	ОК	272	non- engaged	No	Inactive	-308	Drive
- 3.5	10.7 [17.2]	ОК	0.0	ОК	Off	ОК	272	non- engaged	No	Inactive	-308	Drive
- 3.0	10.7 [17.2]	ОК	0.0	ОК	Off	ОК	272	non- engaged	No	Inactive	-308	Drive
- 2.5	10.7 [17.2]	ОК	0.0	ОК	Off	ОК	272	non- engaged	No	Inactive	-308	Drive
- 2.0	10.7 [17.2]	ОК	0.0	ОК	Off	ОК	272	non- engaged	No	Inactive	-308	Drive
- 1.5	0.0 [0.0]	Faulty	0.0	ОК	Off	ОК	272	non- engaged	No	Inactive	-308	Drive
- 1.0	0.0 [0.0]	Faulty	0.0	ОК	Off	ОК	272	non- engaged	No	Inactive	-308	Drive
- 0.5	0.0 [0.0]	Faulty	0.0	ОК	Off	ОК	272	non- engaged	No	Inactive	-308	Drive
0.0	0.0 [0.0]	Faulty	0.0	ОК	Off	ОК	272	non- engaged	No	Inactive	-308	Drive

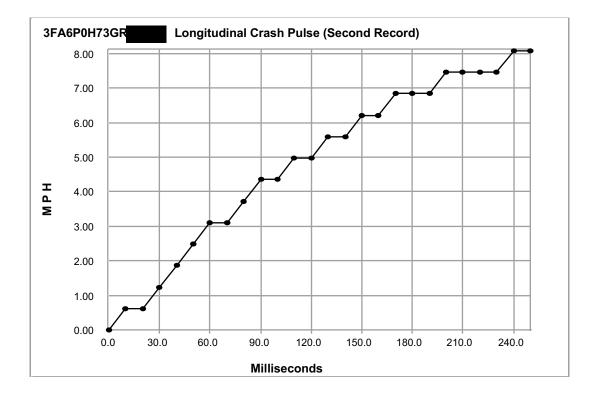
#### Pre-Crash Data -5 to 0 sec [2 samples/sec] (Second Record)



	Cash Data -5	Stability			
	Control	Control	Stability	Stability	Steering
Time	Lateral				Wheel Angle
(sec)		Longitudinal	Control Yaw	Control Roll	
()	Acceleration	Acceleration	Rate (deg/sec)	Rate (deg/sec)	(deg)
	(g)	(g)			
- 5.0	-0.02	0.00	-0.21	0.00	0.3
- 4.9	-0.01	0.00	-0.21	0.00	0.0
- 4.8	-0.02	0.00	-0.22	0.00	0.0
- 4.7	-0.01	0.00	-0.19	0.00	-0.1
- 4.6	-0.01	0.00	-0.22	0.00	0.0
- 4.5	-0.01	0.00	-0.20	0.00	0.0
- 4.4	-0.02	0.00	-0.22	0.00	0.0
- 4.3	-0.01	0.00	-0.24	0.00	-0.1
- 4.2	-0.01	0.00	-0.23	0.00	-0.1
- 4.1	-0.01	0.00	-0.17	0.00	-0.1
- 4.0	-0.01	0.00	-0.24	0.00	-0.2
- 3.9	-0.01	0.00	-0.17	0.00	-0.7
- 3.8	-0.01	0.00	-0.25	0.00	0.9
- 3.7	-0.02	0.00	-0.18	0.00	0.9
- 3.6	-0.02	0.00	-0.25	0.00	1.0
- 3.5	-0.01	-0.01	-0.23	0.00	1.2
- 3.4	-0.01	0.00	-0.20	0.00	1.2
- 3.3	-0.02	0.00	-0.26	0.00	1.2
- <u>3.3</u> - 3.2	-0.02	0.00	-0.20	0.00	1.2
- <u>3.2</u> - 3.1	-0.01	-0.01	-0.20	0.00	0.7
- 3.0	-0.01	0.00	-0.25	0.00	2.4
- 2.9	-0.01	0.00	-0.25	0.00	1.7
	-0.02				4.2
<u>- 2.8</u> - 2.7	0.07	-0.01 -1.72	-0.15 -0.96	0.00	5.1
- 2.6	1.83	-1.72 -3.28	-0.96	0.00	7.6
	-0.05		-59.71	0.00	2.9
<u>- 2.5</u> - 2.4	0.88	<u>-1.56</u> -3.12	-98.23	0.00	-26.8
- 2.3	-1.29	-2.36	-150.76	0.00	-26.8
- 2.2	-0.03	-0.46	-126.73	0.00	0.0
- 2.1	0.12	-0.38	-117.73	0.00	0.0
- 2.0	-0.19	-0.31	-112.62	0.00	0.0
- 1.9	-0.12	-0.28	-112.87	0.00	0.0
- 1.8	1.28	0.17	-125.35	0.00	0.0
- 1.7	0.94	-0.17	-132.61	0.00	0.0
- 1.6	1.72	-0.41	-154.81	0.00	0.0
- 1.5	1.69	-0.40	-158.14	0.00	0.0
- 1.4	1.65	-0.45	-158.70	0.00	0.0
- 1.3	1.32	-0.67	-159.95	0.00	0.0
- 1.2	-0.39	-0.16	-159.57	0.00	0.0
- 1.1	1.56	0.45	-163.84	0.00	0.0
- 1.0	1.59	0.89	-163.84	0.00	0.0
- 0.9	0.61	0.78	-163.70	0.00	0.0
- 0.8	-1.10	0.03	-163.76	0.00	0.0
- 0.7	0.70	-0.23	-163.74	0.00	0.0
- 0.6	-0.06	-0.58	-163.74	0.00	0.0
- 0.5	2.84	-0.19	-155.86	0.00	0.0
- 0.4	0.11	-0.22	-145.48	0.00	0.0
- 0.3	0.12	-0.30	-151.36	0.00	0.0
- 0.2	-0.12	-0.42	-138.74	0.00	0.0
- 0.1	0.00	-0.45	-158.70	0.00	0.0
0.0	1.32	-0.67	-159.95	0.00	0.0

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

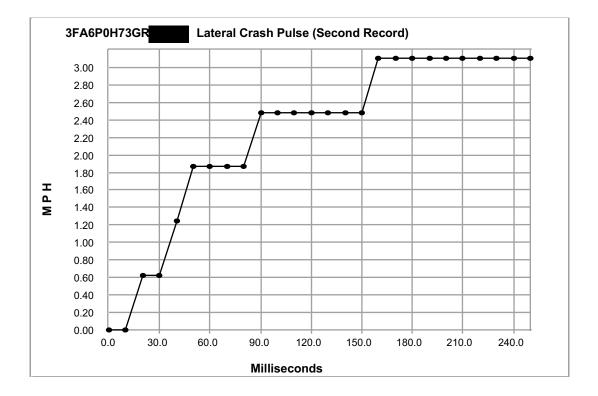




### Longitudinal Crash Pulse (Second Record)

Time (msec)	Delta-V, longitudinal (MPH)	Delta-V, longitudinal (km/h)
0	0.0	0
10	0.6	1
20	0.6	1
30	1.2	2
40	1.9	3
50	2.5	4
60	3.1	5
70	3.1	5
80	3.7	6
90	4.3	7
100	4.3	7
110	5.0	8
120	5.0	8
130	5.6	9
140	5.6	9
150	6.2	10
160	6.2	10
170	6.8	11
180	6.8	11
190	6.8	11
200	7.5	12
210	7.5	12
220	7.5	12
230	7.5	12
240	8.1	13
250	8.1	13



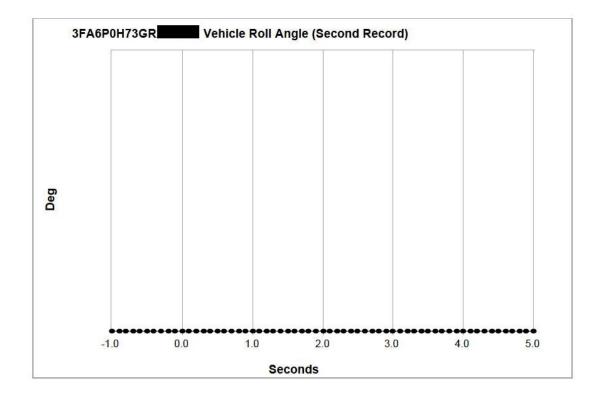


### Lateral Crash Pulse (Second Record)

Time (msec)	Delta-V, lateral (MPH)	Delta-V, lateral (km/h)
0	0.0	0
10	0.0	0
20	0.6	1
30	0.6	1
40	1.2	2
50	1.9	3
60	1.9	3
70	1.9	3
80	1.9	3
90	2.5	4
100	2.5	4
110	2.5	4
120	2.5	4
130	2.5	4
140	2.5	4
150	2.5	4
160	3.1	5
170	3.1	5
180	3.1	5
190	3.1	5
200	3.1	5
210	3.1	5
220	3.1	5
230	3.1	5
240	3.1	5
250	3.1	5







# Vehicle Roll Angle (Second Record)

Time (sec)	Vehicle Roll Angle (deg)
-1.0	0.0
-0.9	0.0
-0.8	0.0
-0.7	0.0
-0.6	0.0
-0.5	0.0
-0.4	0.0
-0.3	0.0
-0.2	0.0
-0.1	0.0
0.0	0.0
0.1	0.0
0.2	0.0
0.3	0.0
0.4	0.0
0.5	0.0
0.6	0.0
0.7	0.0
0.8	0.0
0.9	0.0
1.0	0.0
1.1	0.0
1.2	0.0
1.3	0.0
1.4	0.0
1.5	0.0
1.6	0.0
1.7	0.0
1.8	0.0

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1.9	0.0
2.0	0.0
2.1	0.0
2.0 2.1 2.2	0.0
2.3	0.0
2.4	0.0
2.3 2.4 2.5	0.0
2.6 2.7	0.0
2.7	0.0
2.8	0.0
2.8 2.9	0.0
3.0 3.1 3.2	0.0
3.1	0.0
3.2	0.0
3.3	0.0
3.4	0.0
3.4 3.5 3.6 3.7	0.0
3.6	0.0
3.7	0.0
3.8	0.0
3.9	0.0
4.0	0.0
3.8 3.9 4.0 4.1 4.2 4.3	0.0
4.2	0.0
4.3	0.0
4.4	0.0
4.5	0.0
4.4 4.5 4.6 4.7	0.0
4.7	0.0
4.8 4.9 5.0	0.0
4.9	0.0
5.0	0.0



#### **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.

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Printed on: Thursday, Ju	00   2F   00   00   3E   86     00   37   00   27   00   00     1F   6F   00   12   00   2D     00   00   3E   86   FF   59     00   00   2E   00   00   3E     01   19   00   2A   00   00     01   19   00   2A   00   00     01   19   00   2A   00   00     02   2B   00   00   3E   6A     00   2B   00   2B   00   2B     01   2D   00   3E   8A   FF     01   2T   00   3A   00   1E     010   00   00   00   00   00     010   00   00   00   00   00     010   00   00   00
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### **Disclaimer of Liability**

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