March 15, 2017
CL-10923921-8088

U.S. DOT Nat. Hwy Traffic
Safety Administration
Office of Defects Investigation
(NVS-210)
1200 New Jersey Ave. SE., West Bldg.
WA D.C. 20590

Tucson AZ
NHTSA Tracking
109 239 21

Phone ▮
Email ▮

MAR 22 2017

To whom it concerns;

I'm writting to send a copy of the Crash
Data from the computer on my 2013 Toyota Prius,
that was involved in a crash because of
a cadistrophic failure of the brake system.
I'm including my Aanalysis of this data and
a copy of Toyotas investigation letter
that denys any brake failure, which is
false. I hope that you will study this
crash data and come to the same
conclusion that I made.
I hope to have your reply soon and
that a recall will be issued for this
brake failure defect.
            Sincerely, ▮

ET
3.24.17
LD

My Analysis of the Computer Crash Data from my 2013 Toyota Prius

1. On line 1, line 7, and line 8 of page 9, at 4.65 seconds before the impact crash, I tapped the brake pedal (line 7), causing the cruise control to turn off (line 14) and the Oil Brake Pressure (line 8), to momentarily come on, with a slight pressure of .05 Mpa.

2. On line 8, at 4.15 seconds before the crash, the computer data shows that the Brake Oil Pressure went back to Zero and stayed at Zero until .65 seconds (line 1) before impact. Line 3 shows that I was off the accelerator the entire time.

3. Line 7 data shows at 3.65 seconds before the crash, I applied the brakes and that the brakes were on all the way to the moment of impact with the vehicle in front of me, but line 8 data, shows that the Brake Oil Pressure did not come on until .65 seconds before impact! And it shows that I applied the maximum brake pressure of 12.14 Mpa (see page 3, note 3).

In conclusion, the computer crash data from my 2013 Toyota Prius, clearly shows on line 7, that I applied the brakes at 3.65 seconds before my car crashed into the car in front of me. It's obvious from the computer crash data, that I was in complete control of my vehicle before the crash and that I applied the brakes with plenty of time (3.65 seconds) to safely stop my vehicle. What the data also indicates, is that there was a cadi-strophic failure of the brake system.

I'm requesting that the charge of, "failure to control my vehicle", be removed because I did have complete control of my vehicle, but crashed because of a brake failure that was beyond my control.

Sincerely, █████████

Note: this analysis was given to the traffic court judge because I received a citation of failure to control my vehicle. After studying this data the judge came to the conclusion that I was not at fault, because the data shows that it was a brake failure that was beyond my control.

TOYOTA

Carlos Garcia
Direct Phone (310) 468-7521
Fax (310) 381-8690

TOYOTA MOTOR NORTH AMERICA, INC.
19001 South Western Avenue
Torrance, CA 90501

January 18, 2017

[REDACTED]

Tucson, AZ [REDACTED]

RE: Date of Loss : October 28, 2016
     Vehicle : 2013 Toyota Prius
     VIN : JTDKN3DP4D3[REDACTED]

Dear Mr. [REDACTED]

    We appreciate you contacting Toyota's Customer Experience Center in regards to your incident.

    It was reported that your 2013 Toyota Prius experienced brake failure, causing a collision with a vehicle.

    In response to your concerns, Toyota Motor North America, Inc. assigned a Field Technical Specialist to inspect your vehicle November 17, 2016 at Insurance Auto Auction and obtain a copy of the Event Data Recorder (EDR) readout. Based on our inspection of your vehicle, we found no evidence that this incident was the result of any type of brake defect.

[handwritten: Engine Compartment was so crushed that hood could not be opened!]

    When tested, the brake pedal was operating normally. The brake components were in good condition with no brake fluid leaks. The brake fluid was below minimum *[handwritten: wrong]* level. When test driven with various braking applications, no issues were found. All the vehicle's tires were worn.

[handwritten: ? / Was Not Driveable !]

    We were very sorry to hear about this unfortunate incident, and we appreciate the opportunity to address your concerns.

[handwritten: I was present at the car for Investigators Inspection.]

Sincerely,

Carlos Garcia (signature)

Carlos Garcia
Legal Claims Administrator
Toyota Motor North America, Inc.

*[handwritten: * Was ~~what about~~ analysis of Event Data done?*
1. Seat Belt Tensioner didn't work!
2. Brakes did not engage for 1 whole second!
Get copy of Data Interpretation!]

TUCSON CITY COURT

103 E. ALAMEDA ST.   P.O. BOX 27210   TUCSON, ARIZONA 85726-7210   PHONE: (520) 791-4216

State of Arizona, Plaintiff	Docket Number:	CIVIL TRAFFIC
███████████ Defendant	Citation Number: ███████████	JUDGMENT

PLEA	CITATION NO.	OFFENSE/VIOLATION	OFF. DATE	JUDGMENT	DISPOSITION	DISM
	████████	FL CNTL SPEED	10-17-16	NR	———————	

Car data appears to show that vehicle brakes malfunctioned/failed to properly engage when applied. This mitigating factor justifies a finding of Not Responsible due to mechanical failure beyond Defendant's control.

A. ☐ **HEARING was held:**

☐ State appeared
  ☐ By counsel, _____
☑ State's witness appeared

☐ **It is ORDERED** that judgment for the State be entered; **defendant is found responsible** (as indicated above). Pay sanctions given above as follows:
  ☐ By **converting deposit**, refunding any balance.
  ☐ **In full** by _____.
    ☐ Or show proof of _____ hours of **community service** by same date.
  ☐ **Installments** of $_____ every _____, start_____.
  ☐ Waive [ ] surcharge [ ] _____, defendant found indigent.
  ☐ _____

☑ **It is ORDERED** that judgment for the defendant be entered; **defendant is found not responsible** (as indicated above) and complaint(s) is/are dismissed. Refund any deposit.

B. ☐ The parties entered into an **AGREEMENT**, reflected above, and accepted by the Court:
☑ Defendant appeared
☑ Without counsel, personally
  ☐ By counsel, _____
  ☐ By counsel, _____, and personally present

C. ☐ **DEFENDANT DID NOT APPEAR** personally or through counsel; State was prepared to proceed with
_____, excused.

☐ It is **ORDERED** that a default judgment be entered in favor of the State. Face of complaint does not indicate that Defendant is in military service.
☐ _____.
☐ Pay _____ by _____ (includes surcharges and assessments).
☐ Convert deposit.

D. ☐ **DISMISS** charges as shown above, **ON MOTION** of _____. Refund any deposit.
  ☐ State not ready.
  ☐ _____.

☐ **CODE 11** (reinstatement fee required)
☐ **CODE 59** (no reinstatement fee required)
☐ C.T.D. sentenced—points. Enroll by _____

MVD NOTIFIED

☐ White—File, ☑ Canary—Defendant, ☐ Pink—Prosecutor ☐ Attorney

2-21-17
Date _____

_____
Judge/Hearing Officer

Initials & Date
CC Form #60

Rev. 9/96

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/Frame Number	JTDKN3DP4D3█████
User	Joseph
Case Number	████████
EDR Data Imaging Date	11/17/2016
Crash Date	10/17/2016
Filename	JTDKN3DP4D3█████ACM.CDRX
Saved on	Thursday, November 17 2016 at 09:25:03
Collected with CDR version	Crash Data Retrieval Tool 16.6
Reported with CDR version	Crash Data Retrieval Tool 16.6
EDR Device Type	Airbag Control Module
Event(s) recovered	Front/Rear (1), Side (1)

Comments
No comments entered.

Data Limitations
CDR Record Information:

- Due to limitations of the data recorded by the airbag ECU, such as the resolution, data range, sampling interval, time period of the recording, and the items recorded, the information provided by this data may not be sufficient to capture the entire crash.
- Pre-Crash data is recorded in discrete intervals. Due to different refresh rates within the vehicle's electronics, the data recorded may not be synchronous to each other.
- Airbag ECU data should be used in conjunction with other physical evidence obtained from the vehicle and the surrounding circumstances.
- If any of the front passenger seat airbags, side airbags, or Curtain Shield Airbags have deployed, data will not be overwritten or deleted by the airbag ECU following that event. If none of the airbags have deployed, the data of that event may be overwritten by a following event even if other airbags (pretensioner, rear seat airbag, etc.) have deployed.
- If power supply to the airbag ECU is lost during an event, all or part of the data may not be recorded.
- "Diagnostic Trouble Codes" are information about faults when a recording trigger is established. Various diagnostic trouble codes could be set and recorded due to component or system damage during an accident.
- The airbag ECU records only diagnostic information related to the airbag system. It does not record diagnostic information related to other vehicle systems.
- The TaSCAN, Global TechStream, or Intelligent Tester II devices (or any other Toyota genuine diagnostic tool) can be used to obtain detailed information on the diagnostic trouble codes from the airbag system, as well as diagnostic information from other systems. However, in some cases, the diagnostic trouble codes of the airbag system recorded by the airbag ECU when the event occurred may not match the diagnostic trouble codes read out when the diagnostic tool is used.

General Information:

- The data recording specifications of Toyota's airbag ECUs are divided into the following eight categories. The specifications for 12EDR or later are designed to be compatible with NHTSA's 49CFR Part 563 rule.
  - 00EDR / 02EDR / 04EDR / 06EDR / 10EDR / 12EDR / 13EDR / 15EDR
- The airbag ECU records data for all or some of the following accident types: frontal crash, rear crash, side crash, and rollover events. Depending on the installed airbag ECU, data for side crash and/or rollover events may not be recorded.
- This airbag ECU records record pre-crash data and post-crash data.
  - If a single event occurs independently, the data for that event is recorded on a one-to-one basis.
  - If multiple events occur successively (within a period of approximately 500ms), the establishment of the recording trigger for the first event is defined as the "pre-crash recording trigger". Pre-crash data for the first event and post-crash data for each successive event is then recorded.
- The airbag ECU has two recording pages (memory maps) to store pre-crash data. Additionally, to store post-crash data, the airbag ECU has two recording pages for each accident type: two pages for frontal and rear crash, two pages for a side crash, and two pages for rollover event.
- The data recorded by the airbag ECU includes correlating information between each previously occurring event (i.e., information that clarifies the collision event sequence. This correlation information consists of the following items.
  - Time from Previous Pre-Crash TRG
  - Linked Pre-Crash Page
  - Time from Pre-Crash TRG
  - TRG Count

- Previous Crash Type

- In frontal and rear collision events, the first point where a longitudinal cumulative delta-V of over 0.8 km/h (0.5 mph) is reached is regarded as time zero for the recorded data. In side impact collision and rollover events, the point in time at which the recording trigger is established is regarded as time zero for the recorded data.
- The recording trigger judgment threshold value differs depending on the collision type (i.e., frontal crash, rear crash, side crash, or rollover event).
- Some of the data recorded by the airbag ECU is transmitted to the airbag ECU from various vehicle control modules by the vehicle's Controller Area Network (CAN).
- In some cases, the airbag ECU part number printed on the ECU label may not match the airbag ECU part number that the CDR tool reports. The part number retrieved by the CDR tool should be considered as the official ECU part number.
- In frontal and rear collision events, the record time varies depending on the period during which a longitudinal cumulative delta-V of over 0.8 km/h (0.5 mph) is reached, and time series data is recorded for up to 250 ms. The record time described above is indicated as "Length of Delta-V". "Delta-V, Longitudinal" outside the record time is indicated by area shaded in the table, and not indicated in the graph.

Data Element Sign Convention:

The following table provides an explanation of the sign notation for data elements that may be included in this CDR report.

Data Element Name	Positive Sign Notation Indicates
Maximum Delta-V, Longitudinal	Forward
Delta-V, Longitudinal	Forward
Maximum Delta-V Lateral, Side Satellite Sensor 1	Left to Right
Maximum Delta-V Lateral, Side Satellite Sensor 2	Left to Right
Maximum Delta-V Lateral, Side Satellite Sensor 3	Left to Right
Maximum Delta-V Lateral, Side Satellite Sensor 4	Left to Right
Delta-V Lateral, Side Satellite Sensor 1	Left to Right
Delta-V Lateral, Side Satellite Sensor 2	Left to Right
Delta-V Lateral, Side Satellite Sensor 3	Left to Right
Delta-V Lateral, Side Satellite Sensor 4	Left to Right
Roll Angle Peak	Clockwise Rotation
Roll Angle at the Time of TRG	Clockwise Rotation
Roll Rate	Clockwise Rotation
Lateral Acceleration , Airbag ECU Sensor *	Left to Right
Longitudinal Acceleration , VSC Sensor	Forward
Yaw Rate	Left Turn
Steering Input	Left Turn

* For sensing a rollover

1) Data Definitions:
2)

- The "ON" setting for the "Freeze Signal" indicates a state in which the non-volatile memory can not be overwritten or deleted by the airbag ECU. After "Freeze Signal" has been turned ON, subsequent events will not be recorded.
- "Recording Status" indicates a state in which all recorded event data has been written into the non-volatile memory, or a state in which this process was interrupted and not fully written into the non-volatile memory. If "Recording Status" is "Incomplete", recorded event data may not be valid.
- If the "Occupant Size Classification, Front Passenger" displays "Child" or "Not Occupied", "Side Air Bag Deployment, Time to Deploy" and "Pretensioner Deployment, Time to Fire" may indicate a time even if deployment did not occur on the for following part no's:
  - 89170-07280, 35400, 35410, 35470, 42660, 0R120, 0R080, 0R081, 0R150
- "Engine RPM" indicates the number of engine revolutions, not the number of motor revolutions. The recorded value has an upper limit of 12,800 rpm. Resolution is 100 rpm and the value is rounded down and recorded. For example, if the actual engine speed is 799 rpm, the recorded value will be 700 rpm.
- If the electric vehicle is using a calculated/virtual engine RPM for drivetrain control, "Engine RPM" may be recorded, but should not be used during data analysis.
- The upper limit for the recorded "Vehicle Speed" value is 200 km/h (125mph). Resolution is 1km/h (0.6mph) and the value is rounded down and recorded. The accuracy of the "Vehicle Speed" value can be affected by various factors. These include, but not limited, to the following.
  - Significant changes in the tire's rolling radius
  - Wheel lock and wheel slip
- "Accelerator Pedal" has two recording specifications. Both the recorded value increases as the driver depresses the accelerator.
  - Percentage of accelerator pedal depressed (recorded as 0-100(%)).
  - Output voltage of accelerator pedal module (recorded as 0-5(V)).
- If M/T transmission vehicle of some limited model, "Shift Position " may display "Drive" regardless of the actual shift position.
- Depending on the type of occupant sensor installed in the vehicle, one of the following three recording formats for "Occupant Size Classification, Front Passenger" will be utilized.
  - Occupied / Not Occupied
  - AM50 / AF05 / Child / Not Occupied
  - AM50 / AF05 / Child or Not Occupied
- "Cruise Control Status" indicates whether the cruise control system is actuated or not. OFF indicates that the cruise control system is not actuated, but can also indicates that the vehicle is not equipped with the system.

- "Air Bag Warning Lamp, On/Off", "Ignition Cycle, Crash", "Seat Track Position Switch, Foremost, Status, Driver", "Occupant Size Classification, Front Passenger", "Safety Belt Status, Driver", "Safety Belt Status, Front Passenger", "Frontal Air Bag Suppression Switch Status, Front Passenger", and "RSCA Disable Switch" indicate the state approximately 1 second before time zero. They may not always indicate the state at the moment of collision.
- The upper and lower limits for the recorded value of "Motor RPM" is 17,500 rpm and -7,500 rpm respectively. Resolution is 100 rpm and the value is rounded down and recorded.

Note 3 • "Brake Oil Pressure" has an upper limit of 12.14 Mpa. In the case of the vehicle that has not VSC system, "0 Mpa" or "Invalid" may be displayed.

- "Longitudinal Acceleration , VSC Sensor" has upper and lower limits for the recorded value of 8.973 m/s^2 and -8.973 m/s^2 respectively. This acceleration sensor does not sense collisions.
- "Sequential Shift Range" displaying "Undetermined" indicates the shift range is undetermined or was not being used.
- Some vehicles will not be equipped with all "Drive Mode" types indicated in the "Drive Mode" table. If some or all drive modes are not applicable to vehicle, "OFF" or "Invalid" may be displayed. The item in the "Drive Mode" table may not match the name of switch or indicator that equipped the vehicle.
- The upper and lower limits for the recorded value of "Steering Input" is 375 deg and -375 deg respectively. Resolution is 3 deg and the value is rounded down and recorded.
- Resolution of the "Air Bag Warning Lamp ON Time Since DTC was Set" is 15 minutes, and the value is rounded down and recorded.
- "Delta-V, Longitudinal" indicates the change in forward speed after time zero. This does not refer to vehicle speed, and it does not include the change in speed during the period from the start of the actual collision to establishment of the time zero.
- "Location of Side Satellite Sensor" shows the outline of a typical sensor position. Sensory location can be confirmed using the repair manual.
- For "Lateral Delta-V", the acceleration sensor installed in the airbag ECU is not used but the satellite sensor is used for the "Lateral Delta-V" calculation.
- "Time from Previous Pre-Crash TRG" indicates the time between the establishment of an event's pre-crash recording trigger to the establishment of a more recent event's pre-crash recording trigger. The upper limit for the recorded value is 16,381 milliseconds. In the event of establishment of the first pre-crash recording trigger after the ignition is switched ON, the upper limit value(max value) is recorded.
- "TRG Count" indicates a calculated value of the number of times recording triggers have been established for all crash types. The sequence in which each event occurred can be verified from the "TRG Count". The smaller the "TRG Count" value, the older the data. The upper limit for the recorded value is 65,533 times. When more than one event reaches the upper limit, the actual "TRG Count" may be greater than what is displayed for that event.
- "Linked Pre-Crash Page" is used to link 'paged" pre-crash data with 'paged" post-crash data. When old pre-crash data is overwritten by new pre-crash data, the "Linked Pre-Crash Page" value may record a page number that is not actually linked.
- Resolution of the "Time from Pre-Crash to TRG" is 50 [ms], and the value is rounded up and recorded.
- "Roll Angle at the Time of TRG" and "Roll Angle Peak" do not represent the actual roll angle of the vehicle. These values are used internally by the airbag ECU for sensing a rollover.

05012_ToyotaS03std_r025

System Status at Time of Retrieval

ECU Part Number	89170-47280
EDR Generation	12EDR
Complete File Recorded	Yes
Freeze Signal	ON
Freeze Signal Factor	Front Airbag Deployment
Diagnostic Trouble Codes Exist	No
Ignition Cycle ,Download (times)	4563
Multi-event, number of events (times)	2 or greater
Time from event 1 to 2 (s)	-0.016
Time from Previous Pre Crash TRG (msec)	16381 or greater
Latest Pre-Crash Page	0
Contains Unlinked Pre-Crash Data	No

Event Record Summary at Retrieval

Events Recorded	TRG Count	Crash Type	Time (msec)	Pre-Crash & DTC Data Recording Status	Event & Crash Pulse Data Recording Status
Most Recent Event	2	Front/Rear Crash	0	Complete (Page 0)	Complete (Front/Rear Page 0)
1st Prior Event	1	Side Crash	16	Complete (Page 0)	Complete (Side Page 0)

System Status at Event (Most Recent Event, TRG 2)

Recording Status, Front/Rear Crash Info.	Complete
Crash Type	Front/Rear Crash
TRG Count (times)	2
Previous Crash Type	Side Crash
Time from Pre-Crash TRG (msec)	3
Linked Pre-Crash Page	0
Frontal Airbag Deployment, Time to 1st Stage Deployment, Driver (msec)	19
Frontal Airbag Deployment, Time to 1st Stage Deployment, Front Passenger (msec)	No
Pretensioner Deployment, Time to Fire, Driver (msec)	19
Pretensioner Deployment, Time to Fire, Front Passenger (msec)	No
Frontal Airbag Deployment, Time to 2nd Stage, Driver (msec)	49
Frontal Airbag Deployment, Time to 2nd Stage, Front Passenger (msec)	N/A
Active Head Restraint, Time to Deploy, Driver (msec)	SNA
Active Head Restraint, Time to Deploy, Front Passenger (msec)	SNA
Side Curtain Airbag Deployment, Time to Deploy, Driver (msec)	69
Side Curtain Airbag Deployment, Time to Deploy, Passenger (msec)	69
Rear Window Airbag Deployment, Time to Deploy (msec)	SNA

Longitudinal Crash Pulse (Most Recent Event, TRG 2 - table 1 of 2)

Recording Status, Time Series Data	Complete
Time from Time Zero to TRG (msec)	19.0
Length of Delta-V (msec)	180
Max. Longitudinal Delta-V (MPH [km/h])	-12.7 [-20.4]
Time, Maximum Delta-V, Longitudinal (msec)	173.5
Power Supply Status at Max. Delta-V	ON

Longitudinal Delta-V
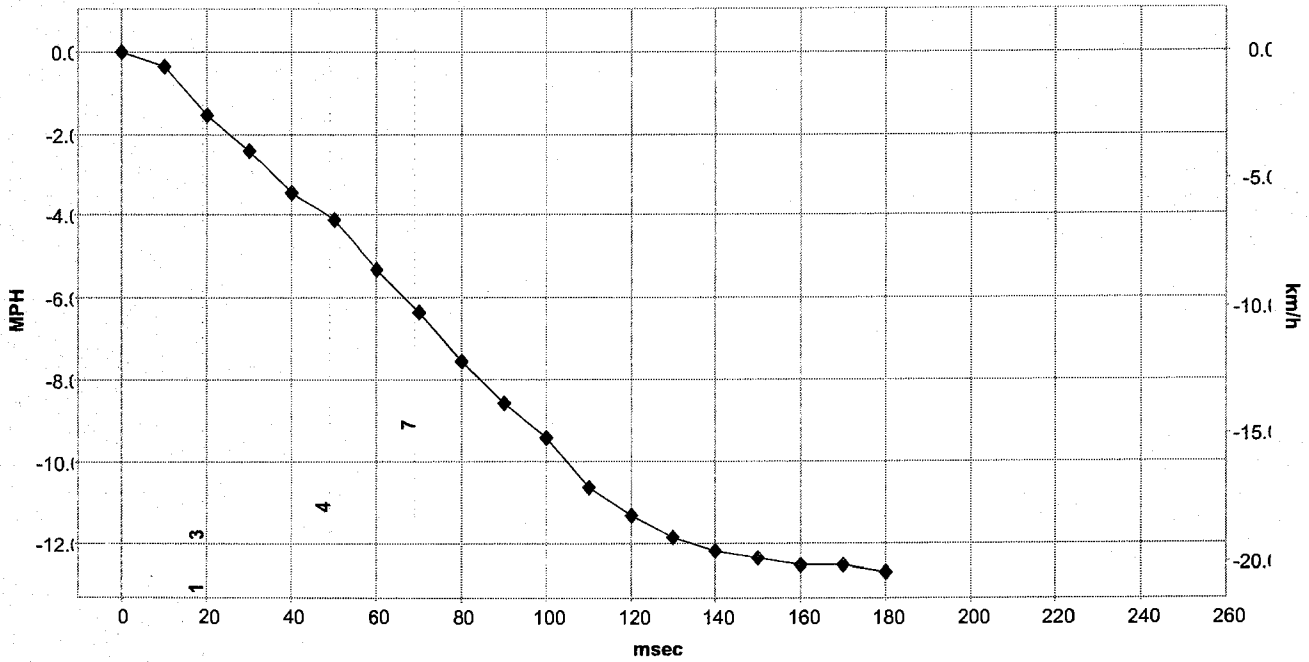
Deployment Time Marker Key

1	Driver Airbag Deployment Time
2	Passenger Airbag Deployment Time
3	Driver/Passenger Pretensioner
4	Driver 2nd Stage Airbag Deployment Time
5	Passenger 2nd Stage Airbag Deployment
6	Driver/Passenger AHR
7	Driver/Passenger CSA
8	Rear Window Airbag Deployment Time

Longitudinal Crash Pulse (Most Recent Event, TRG 2 - table 2 of 2)

Time (msec)	Longitudinal Delta-V (MPH [km/h])	Power Supply Status
0	0.0 [0.0]	ON
10	-0.3 [-0.6]	ON
20	-1.5 [-2.5]	ON
30	-2.4 [-3.9]	ON
40	-3.4 [-5.5]	ON
50	-4.1 [-6.6]	ON
60	-5.3 [-8.6]	ON
70	-6.3 [-10.2]	ON
80	-7.5 [-12.1]	ON
90	-8.6 [-13.8]	ON
100	-9.4 [-15.2]	ON
110	-10.6 [-17.1]	ON
120	-11.3 [-18.2]	ON
130	-11.8 [-19.0]	ON
140	-12.2 [-19.6]	ON
150	-12.3 [-19.9]	ON
160	-12.5 [-20.1]	ON
170	-12.5 [-20.1]	ON
180	-12.7 [-20.4]	ON
190	0.0 [0.0]	ON
200	0.0 [0.0]	ON
210	0.0 [0.0]	ON
220	0.0 [0.0]	ON
230	0.0 [0.0]	ON
240	0.0 [0.0]	ON
250	0.0 [0.0]	ON

DTCs Present at Time of Event (Most Recent Event, TRG 2)

Recording Status, Diagnostic	Complete
Ignition Cycle Since DTC was Set (times)	0
Airbag Warning Lamp ON Time Since DTC was Set (min)	0
Diagnostic Trouble Codes	None

Pre-Crash Data, 1 Sample (Most Recent Event, TRG 2)

Recording Status, Pre-Crash/Occupant	Complete
Time from Pre-Crash to TRG (msec)	150
Safety Belt Status, Driver	ON
Safety Belt Status, Front Passenger	OFF
Occupant Size Classification, Front Passenger	Not Occupied
Frontal Airbag Suppression Switch Status, Front Passenger	SNA
RSCA Disable Switch	SNA
Seat Track Position Switch, Foremost, Status, Driver	No
Airbag Warning Lamp, On/Off	OFF
Ignition Cycle ,Crash (times)	4553

⊜ BOSCH

Line

Pre-Crash Data, -5 to 0 seconds (Most Recent Event, TRG 2)

	Time (sec)	-4.65	-4.15	-3.65	-3.15	-2.65	-2.15	-1.65	-1.15	-0.65	-0.15	0 (TRG)
1.	Time (sec)	-4.65	-4.15	-3.65	-3.15	-2.65	-2.15	-1.65	-1.15	-0.65	-0.15	0 (TRG)
2.	Vehicle Speed (MPH [km/h])	44.1 [71]	43.5 [70]	42.9 [69]	42.3 [68]	41.6 [67]	41 [66]	39.8 [64]	39.1 [63]	32.9 [53]	21.7 [35]	20.5 [33]
3.	Accelerator Pedal, % Full (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4.	Percentage of Engine Throttle (%)	Invalid	Invalid	Invalid	Invalid	Invalid	Invalid	Invalid	Invalid	Invalid	Invalid	Invalid
5.	Engine RPM (RPM)	1,100	1,100	1,000	1,100	600	100	0	0	0	0	0
6.	Motor RPM (RPM)	5,200	5,100	5,000	4,900	4,900	4,800	4,700	4,600	3,800	2,600	2,400
7.	Service Brake, ON/OFF	ON	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON
8.	Brake Oil Pressure (Mpa)	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.14	12.14	12.14
9.	Longitudinal Acceleration, VSC Sensor (m/sec^2)	-0.933	-0.646	-0.574	-0.790	-0.790	-0.718	-0.646	-0.718	-8.326	-8.111	-8.973
10.	Yaw Rate (deg/sec)	0.00	0.98	0.49	0.00	0.00	0.00	0.00	0.00	3.42	0.00	0.00
11.	Steering Input (degrees)	0	6	3	0	0	0	0	0	9	-9	0
12.	Shift Position	D	D	D	D	D	D	D	D	D	D	D
13.	Sequential Shift Range	Undetermined	Undetermined	Undetermined	Undetermined	Undetermined	Undetermined	Undetermined	Undetermined	Undetermined	Undetermined	Undetermined
14.	Cruise Control Status	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
15.	Drive Mode, PWR	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
16.	Drive Mode, ECO	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
17.	Drive Mode, Sport	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
18.	Drive Mode, Snow	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

Printed on: Thursday, November 17 2016 at 09:25:32

BOSCH

Drive Mode, EV	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Fuel Injection Quantity (mm3/st)	Invalid	Invalid	Invalid	Invalid	Invalid	Invalid	Invalid	Invalid	Invalid	Invalid	Invalid

System Status at Event (1st Prior Event, TRG 1)

Recording Status, Side Crash Info.	Complete
Crash Type	Side Crash
TRG Count (times)	1
Previous Crash Type	No Event
Time from Pre-Crash TRG (msec)	0
Linked Pre-Crash Page	0
Side Airbag Deployment, Time to Deploy (If Equipped) (msec)	No
Side Curtain Airbag Deployment, Time to Deploy (If Equipped) (msec)	No
Pretensioner Deployment, Time to Fire (msec)	SNA
Rear Window Airbag Deployment, Time to Deploy (msec)	SNA

Lateral Crash Pulse (1st Prior Event, TRG 1 - table 1 of 2)

Recording Status, Time Series Data	Complete
Recorded Side	Right Side
Time from TRG to Next Sample (msec)	3
Location of Side Satellite Sensor 1	Not Equipped
Location of Side Satellite Sensor 2	B-Pillar
Location of Side Satellite Sensor 3	Not Equipped
Location of Side Satellite Sensor 4	C-Pillar
Maximum Delta-V Lateral, Side Satellite Sensor 1 (MPH [km/h])	N/A
Maximum Delta-V Lateral, Side Satellite Sensor 2 (MPH [km/h])	0.3 [0.4]
Maximum Delta-V Lateral, Side Satellite Sensor 3 (MPH [km/h])	N/A
Maximum Delta-V Lateral, Side Satellite Sensor 4 (MPH [km/h])	-0.6 [-1.0]

Side Satellite Sensor 1
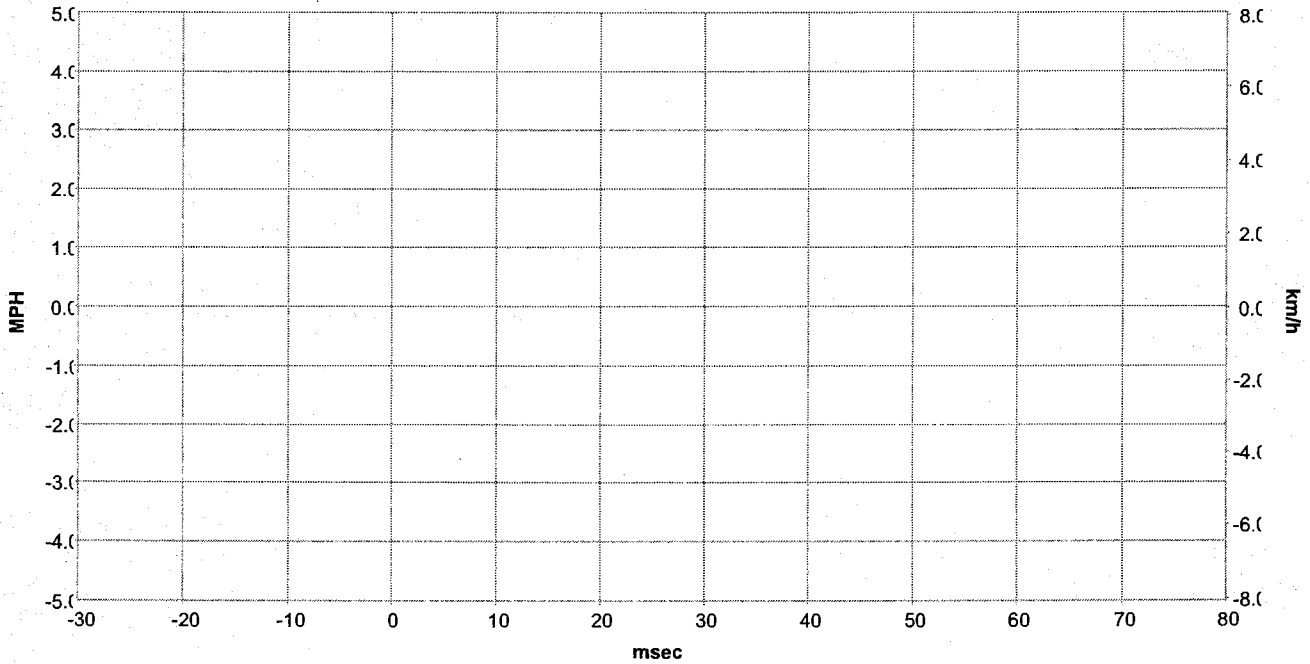
Deployment Time Marker Key

1	Driver/Passenger Pretensioner
2	Side Airbag
3	Rear Window Airbag Deployment Time

Side Satellite Sensor 2

Deployment Time Marker Key

1	Driver/Passenger Pretensioner
2	Side Airbag
3	Rear Window Airbag Deployment Time

Side Satellite Sensor 3
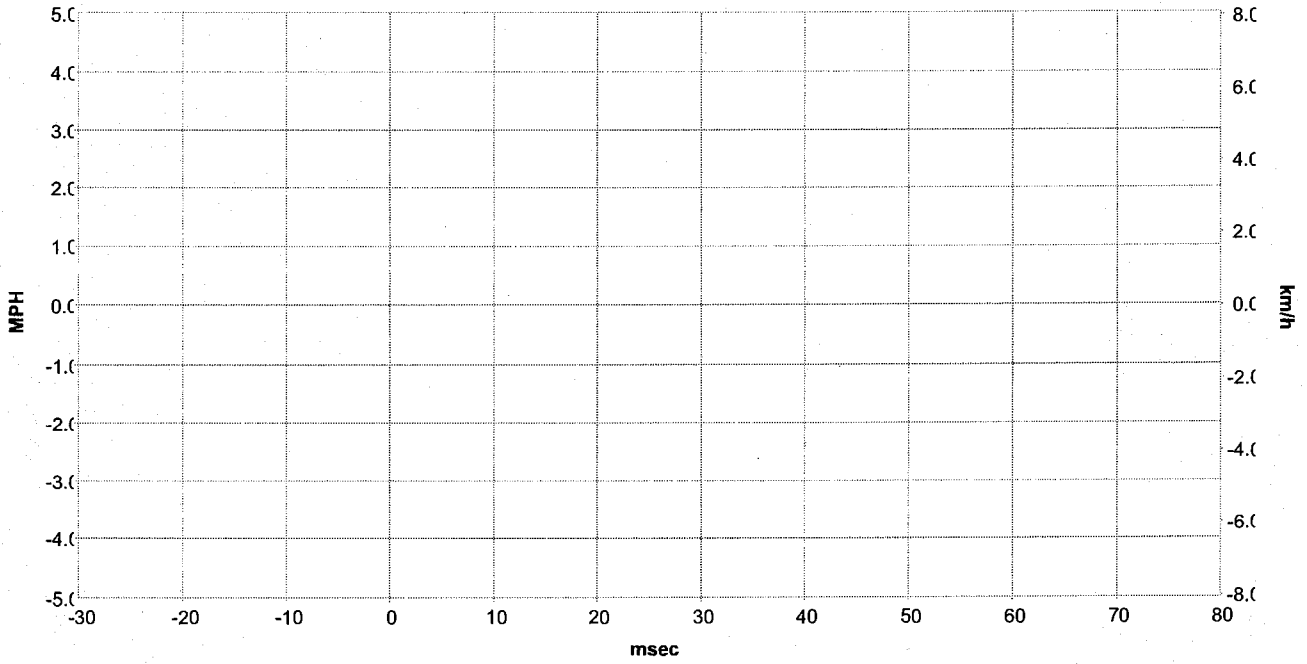
msec

Deployment Time Marker Key

1	Side Curtain Airbag

Side Satellite Sensor 4
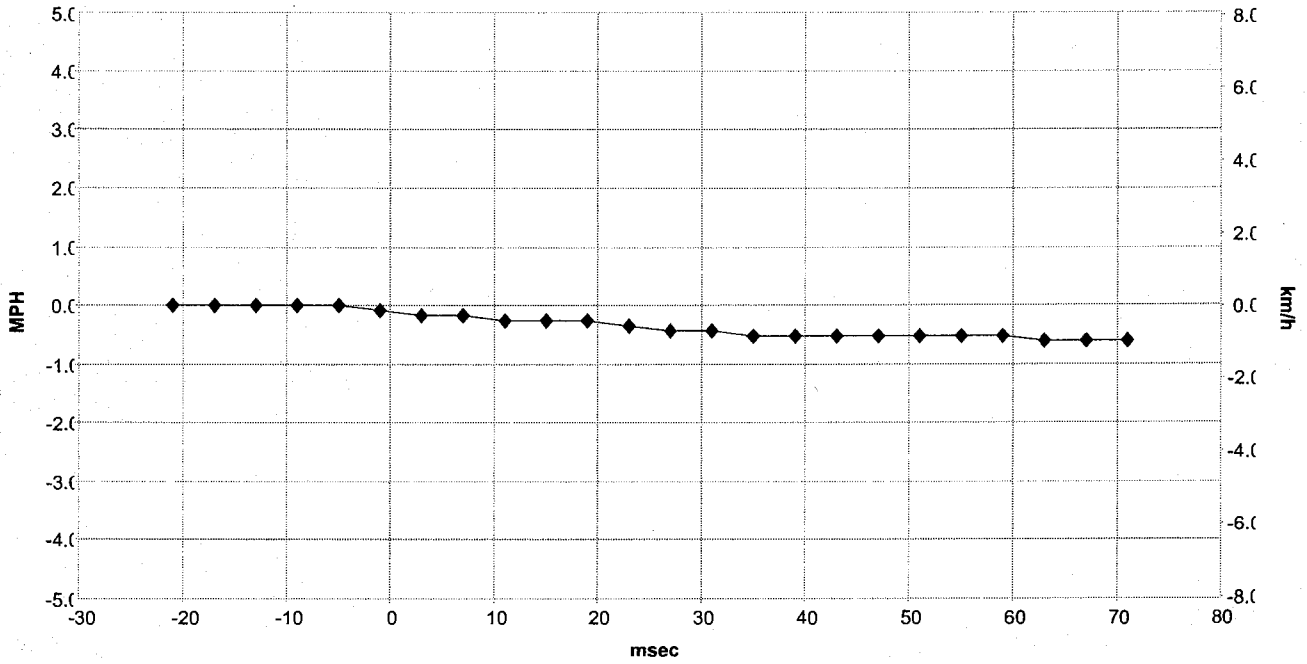
Deployment Time Marker Key

| 1 | Side Curtain Airbag |

Lateral Crash Pulse (1st Prior Event, TRG 1 - table 2 of 2)

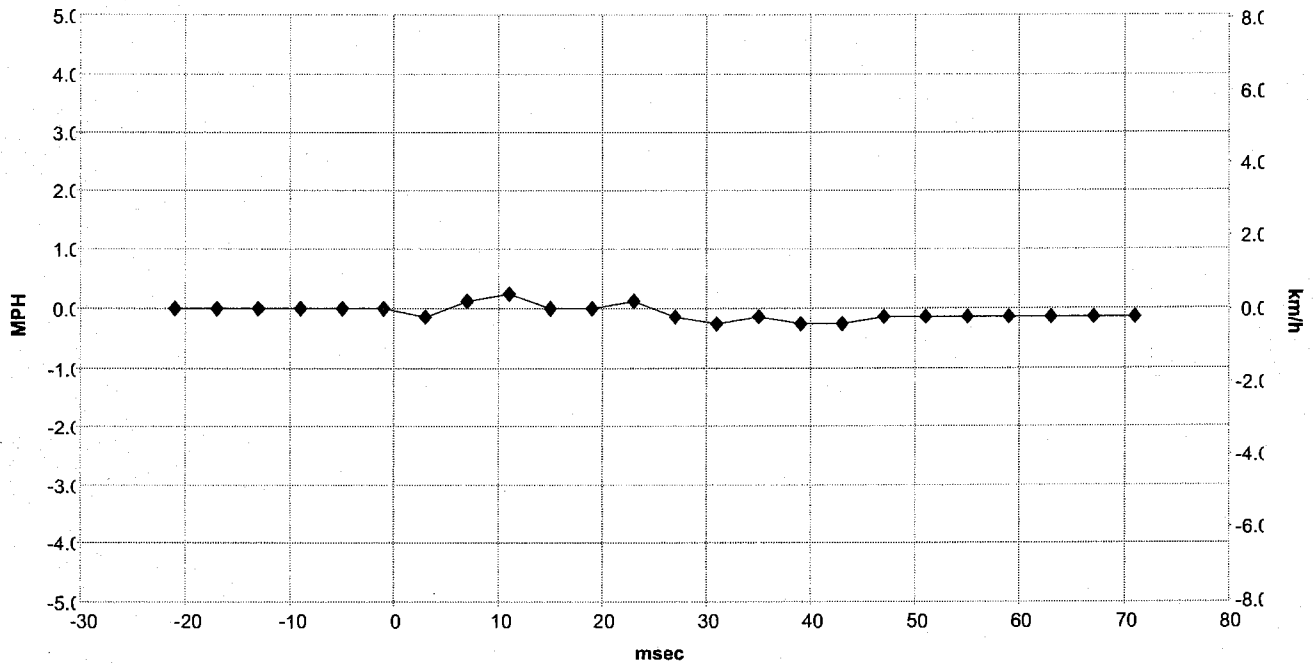| Time (msec)	Delta-V Lateral, Side Satellite Sensor 1 (MPH [km/h])	Delta-V Lateral, Side Satellite Sensor 2 (MPH [km/h])	Delta-V Lateral, Side Satellite Sensor 3 (MPH [km/h])	Delta-V Lateral, Side Satellite Sensor 4 (MPH [km/h])
-21	SNA [SNA]	0.0 [0.0]	SNA [SNA]	0.0 [0.0]
-17	SNA [SNA]	0.0 [0.0]	SNA [SNA]	0.0 [0.0]
-13	SNA [SNA]	0.0 [0.0]	SNA [SNA]	0.0 [0.0]
-9	SNA [SNA]	0.0 [0.0]	SNA [SNA]	0.0 [0.0]
-5	SNA [SNA]	0.0 [0.0]	SNA [SNA]	0.0 [0.0]
-1	SNA [SNA]	0.0 [0.0]	SNA [SNA]	-0.1 [-0.1]
3	SNA [SNA]	-0.1 [-0.2]	SNA [SNA]	-0.2 [-0.3]
7	SNA [SNA]	0.1 [0.2]	SNA [SNA]	-0.2 [-0.3]
11	SNA [SNA]	0.3 [0.4]	SNA [SNA]	-0.3 [-0.4]
15	SNA [SNA]	0.0 [0.0]	SNA [SNA]	-0.3 [-0.4]
19	SNA [SNA]	0.0 [0.0]	SNA [SNA]	-0.3 [-0.4]
23	SNA [SNA]	0.1 [0.2]	SNA [SNA]	-0.3 [-0.6]
27	SNA [SNA]	-0.1 [-0.2]	SNA [SNA]	-0.4 [-0.7]
31	SNA [SNA]	-0.3 [-0.4]	SNA [SNA]	-0.4 [-0.7]
35	SNA [SNA]	-0.1 [-0.2]	SNA [SNA]	-0.5 [-0.8]
39	SNA [SNA]	-0.3 [-0.4]	SNA [SNA]	-0.5 [-0.8]
43	SNA [SNA]	-0.3 [-0.4]	SNA [SNA]	-0.5 [-0.8]
47	SNA [SNA]	-0.1 [-0.2]	SNA [SNA]	-0.5 [-0.8]
51	SNA [SNA]	-0.1 [-0.2]	SNA [SNA]	-0.5 [-0.8]
55	SNA [SNA]	-0.1 [-0.2]	SNA [SNA]	-0.5 [-0.8]
59	SNA [SNA]	-0.1 [-0.2]	SNA [SNA]	-0.5 [-0.8]
63	SNA [SNA]	-0.1 [-0.2]	SNA [SNA]	-0.6 [-1.0]
67	SNA [SNA]	-0.1 [-0.2]	SNA [SNA]	-0.6 [-1.0]
71	SNA [SNA]	-0.1 [-0.2]	SNA [SNA]	-0.6 [-1.0]

DTCs Present at Time of Event (1st Prior Event, TRG 1)

Recording Status, Diagnostic	Complete
Ignition Cycle Since DTC was Set (times)	0
Airbag Warning Lamp ON Time Since DTC was Set (min)	0
Diagnostic Trouble Codes	None

Pre-Crash Data, 1 Sample (1st Prior Event, TRG 1)

Recording Status, Pre-Crash/Occupant	Complete
Time from Pre-Crash to TRG (msec)	150
Safety Belt Status, Driver	ON
Safety Belt Status, Front Passenger	OFF
Occupant Size Classification, Front Passenger	Not Occupied
Frontal Airbag Suppression Switch Status, Front Passenger	SNA
RSCA Disable Switch	SNA
Seat Track Position Switch, Foremost, Status, Driver	No
Airbag Warning Lamp, On/Off	OFF
Ignition Cycle ,Crash (times)	4553

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Pre-Crash Data, -5 to 0 seconds (1st Prior Event, TRG 1)

Time (sec)	-4.65	-4.15	-3.65	-3.15	-2.65	-2.15	-1.65	-1.15	-0.65	-0.15	0 (TRG)
Vehicle Speed (MPH [km/h])	44.1 [71]	43.5 [70]	42.9 [69]	42.3 [68]	41.6 [67]	41 [66]	39.8 [64]	39.1 [63]	32.9 [53]	21.7 [35]	20.5 [33]
Accelerator Pedal, % Full (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentage of Engine Throttle (%)	Invalid	Invalid	Invalid	Invalid	Invalid	Invalid	Invalid	Invalid	Invalid	Invalid	Invalid
Engine RPM (RPM)	1,100	1,100	1,000	1,100	600	100	0	0	0	0	0
Motor RPM (RPM)	5,200	5,100	5,000	4,900	4,900	4,800	4,700	4,600	3,800	2,600	2,400
Service Brake, ON/OFF	ON	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON
Brake Oil Pressure (Mpa)	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.14	12.14	12.14
Longitudinal Acceleration , VSC Sensor (m/sec^2)	-0.933	-0.646	-0.574	-0.790	-0.790	-0.718	-0.646	-0.718	-8.326	-8.111	-8.973
Yaw Rate (deg/sec)	0.00	0.98	0.49	0.00	0.00	0.00	0.00	0.00	3.42	0.00	0.00
Steering Input (degrees)	0	6	3	0	0	0	0	0	9	-9	0
Shift Position	D	D	D	D	D	D	D	D	D	D	D
Sequential Shift Range	Undetermined	Undetermined	Undetermined	Undetermined	Undetermined	Undetermined	Undetermined	Undetermined	Undetermined	Undetermined	Undetermined
Cruise Control Status	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Drive Mode, PWR	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Drive Mode, ECO	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Drive Mode, Sport	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Drive Mode, Snow	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

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Drive Mode, EV	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Fuel Injection Quantity (mm3/st)	Invalid	Invalid	Invalid	Invalid	Invalid	Invalid	Invalid	Invalid	Invalid	Invalid	Invalid

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.

```
PIDs         PID    Data
             00     BC 60 00 01
             01     00
             03     34 37 32 38 30 30 30 30 45 43 30 30 30 45 43 30 30 30 45 36 30 30
                    30 45 36 30 30 30 45 38 30 30 30 45 38
             04     02 02 01 01
             05     01
             06     16
             0A     01
             0B     00
             20     80 00 00 01
             21     02 9F
             40     00 00 00 01
             60     FF FF F0 01
             61     02 03 E8 00 88 80 05 00 00 00 00 00 03 55 03 55 00 00 00 00 05 00
                    05 00 00 00 00 00 00 00 80 00
             62     A5 01 3F FD 11 D3 00 00 00 00
             63     55 08 11 C9 10 10 00 00 11 11 11 11 11 10 47 46 45 44 43 42 40 3F
                    35 23 21 00 00 00 00 00 00 00 00 00 00 00 45 55 54 0B 0B 0A 0B 06
                    01 00 00 00 00 00 00 00 00 00 00 00
             64     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 00 00 00 00 00 00 00 00
             65     55 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
             66     00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
             67     55 10 03 00 02 13 13 13 1E 1E 55 FD FD 00 45
             68     00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
             69     00 26 13 00 00 00 02 00 09 00 0E 00 14 00 18 00 1F 00 25 00 2C 00
                    32 00 37 00 3E 00 42 00 45 00 47 00 48 00 49 00 49 00 4A 00 00 00
                    00 00 00 00 00 00 00 00 00 00 00 00 4A 01 5B
             6A     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 00 00 00 00 00 00 00 00 00 00
             6B     55 E0 00 00 01 FE FE FE FE 55 13 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
             6C     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 00 00 00 00 00 00 00 00 00 00
             6D     00 00 00 00 00 00 01 FE FF 02 00 FF 02 01 FF 01 00 FF 00 00 00 00
                    00 00 00 00 00 00 00 01 01 00 01 00 00 01 01 00 01 00 00 00 00 00
                    00 01 00 00 00 FE
             6E     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 00 00
             6F     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 00 00 00 00 00 00
             70     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 00 00 00 00 00 00
             71     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
             72     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
             73     01 00 00 00 00 00 00 00 FD FD FD 00 02 01 00 00 00 00 00 03 FD 00
                    00 02 01 00 00 00 00 00 07 00 00 F3 F7 F8 F5 F5 F6 F7 F6 8C 8F 83
                    FE FE FE FE FE FE FE FE FE FE FE 00 00 00
             74     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 00 00 00 00 00 00 00 00 00 00
80      00 00 00 01
A0      0C 00 00 01
A5      00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
        7F 7E 7D 7C 7C 7B 7A 79 71 65 63 14 14 14 14 14 14 14 14 14 14 14
        FE FE FE FE FE FE FE FE FE FE FE
A6      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 00 00 00 00 00 00 00
```

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From:

Tucson AZ

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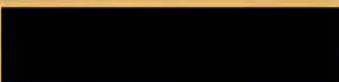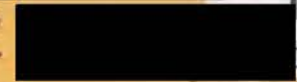
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1000   20590

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~-210)

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~ngto D. C. 20590