

## CDR File Information

User Entered VIN	1FMCU04G89K*****
User	
Case Number	SAMPLE: 2009 Ford Escape
EDR Data Imaging Date	Data collected for CDR v3.1
Crash Date	
Filename	SAMPLE_FORD.CDR
Saved on	Monday, September 15 2008 at 06:08:53 PM
Collected with CDR version	Crash Data Retrieval Tool 3.0.74b Test Version
Reported with CDR version	Crash Data Retrieval Tool 3.1
EDR Device Type	airbag control module
ACM Adapter Detected During Download	Yes
Event(s) recovered	locked frontal event

**IMPORTANT NOTICE:** Robert Bosch LLC recommends that the latest production release of Crash Data Retrieval software be utilized when viewing, printing or exporting any retrieved data from within the CDR program. This ensures that the retrieved data has been translated using the most recent information including but not limited to that which was provided by the manufacturers of the vehicles supported in this product.

## Module Information

The retrieval of this data has been authorized by the vehicle's owner, or other legal authority such as a subpoena or search warrant, as indicated by the CDR tool user on Monday, September 15 2008 at 06:08:53 PM .

### Restraints Control Module Recorded Crash Events:

Deployment Events cannot be overwritten or cleared from the Restraints Control Module (RCM). Once the RCM has deployed any airbag device, the RCM must be replaced. The data from events which did not qualify as deployable events can be overwritten by subsequent events.

The RCM can store up to two deployment events.

### Airbag Module Data Limitations:

- Restraints Control Module Recorded Vehicle Forward Velocity Change reflects the change in forward velocity that the sensing system experienced from the point of algorithm wake up. It is not the speed the vehicle was traveling before the event. Note that the vehicle speed is recorded separately five seconds prior to algorithm wake up. This data should be examined in conjunction with other available physical evidence from the vehicle and scene when assessing occupant or vehicle forward velocity change.
- Event Recording Complete will indicate if data from the recorded event has been fully written to the RCM memory or if it has been interrupted and not fully written.
- If power to the Airbag Module is lost during a crash event, all or part of the crash record may not be recorded.

### Airbag Module Data Sources:

- Event recorded data are collected either INTERNALLY or EXTERNALLY to the RCM.

- INTERNAL DATA is measured, calculated, and stored internally, sensors external to the RCM include the following:
  - > The Driver and Passenger Belt Switch Circuits are wired directly to the RCM.
  - > The Driver's Seat Track Position Switch Circuit is wired directly to the RCM.
  - > The Side Impact Sensors (if equipped) are located on the side of vehicle and are wired directly to the RCM.
  - > The Occupant Classification Sensor is located in the front passenger seat and transmits data directly to the RCM on high-speed CAN bus.
  - > Front Impact Sensors (right and left) are located at the front of vehicle and are wire directly to the RCM.
- EXTERNAL DATA recorded by the RCM are data collected from the vehicle communication network from various sources such as Powertrain Control Module, Brake Module, etc.

### System Status at Time of Retrieval

VIN as programmed into RCM at factory	1FMCU93799K*****
Current VIN from PCM	1FMCU93799K*****
Ignition cycle, download (first record)	102
Ignition cycle, download (second record)	N/A
Restraints Control Module Part Number	9L84-14B321-AJ
Restraints Control Module Serial Number	7000681100000000
Restraints Control Module Software Part Number (Version)	9L34-14C028-AM
Left/Center Frontal Restraints Sensor Serial Number	FFC6442D
Left Side Restraint Sensor 1 Serial Number	FFD3EB59
Left Side Restraint Sensor 2 Serial Number	1391AA
Right Frontal Restraints Sensor Serial Number	FFC643C6
Right Side Restraint Sensor 1 Serial Number	FFCC30EA
Right Side Restraints Sensor 2 Serial Number	FFC39199

### System Status at Event (First Record)

Recording Status	Locked Record
Complete file recorded (yes,no)	Yes
Multi-event, number of events (1,2)	1
Time from event 1 to 2 (msec)	N/A
Lifetime Operating Timer at event time zero (seconds)	14,565
Key-on Timer at event time zero (seconds)	925
Vehicle voltage at time zero (Volts)	12.231
Energy Reserve Mode entered during event (Y/N)	Yes
Time High-G X RCM Sensor Lost Relative to Time Zero (msec)	Data not lost
Time High-G Y RCM Sensor Lost Relative to Time Zero (msec)	Data not lost
Time Low-G Y RCM Sensor Lost Relative to Time Zero (msec)	Data not lost
Time Low-G Z RCM Sensor Lost Relative to Time Zero (msec)	Data not lost
Time RCM Angular Rate Sensor Lost Relative to Time Zero (msec)	Data not lost
Time Driver Front Satellite Sensor Lost Relative to Time Zero (msec)	Data not lost
Time Passenger Front Satellite Sensor Lost Relative to Time Zero (msec)	61.5
Time Driver First Row Satellite Sensor Lost Relative to Time Zero (msec)	Data not lost
Time Passenger Second Row Satellite Sensor Lost Relative to Time Zero (msec)	Data not lost
Time Passenger First Row Satellite Sensor Lost Relative to Time Zero (msec)	100.0
Time Driver Second Row Satellite Sensor Lost Relative to Time Zero (msec)	100.0

**Faults Present at Start of Event (First Record)**

U0028-08
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### Deployment Data (First Record)

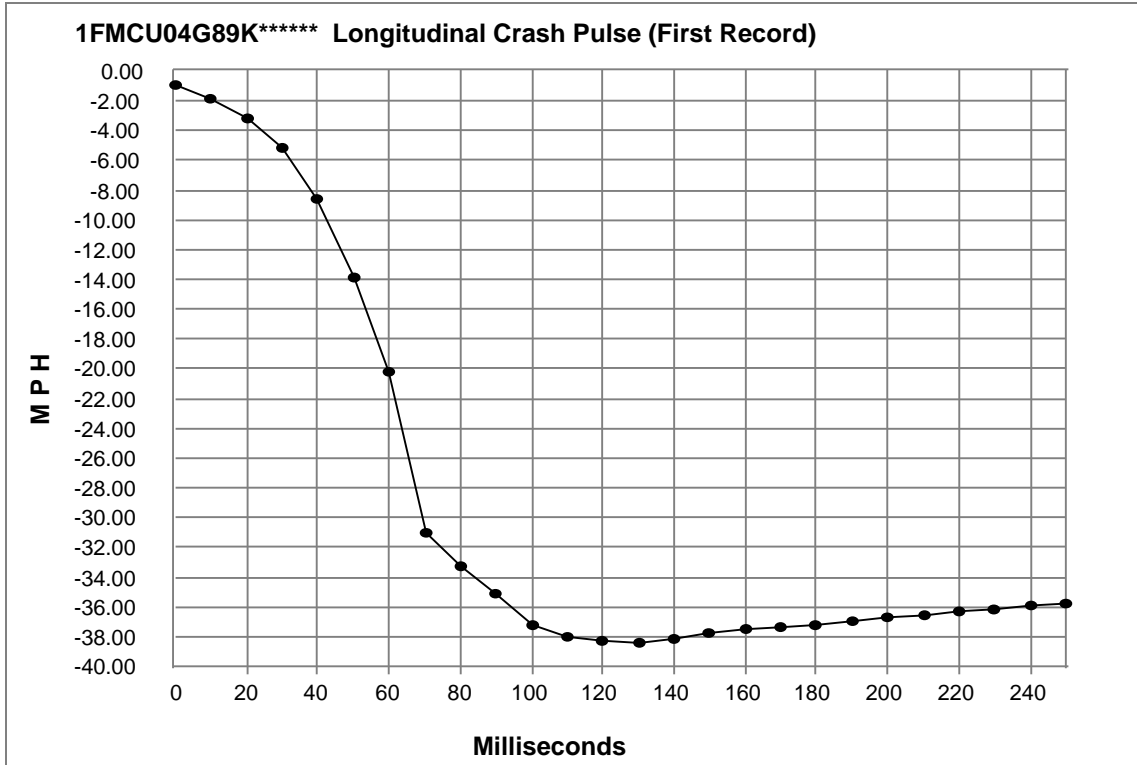
Frontal airbag deployment, time to first stage deployment, driver (msec)	28.0
Frontal airbag deployment, time to 2nd stage, driver (msec)	38.0
Side curtain airbag deployment, time to deploy, driver side (msec)	N/A
Side (thorax) air bag deployment, time to deploy, driver (msec)	N/A
Pretensioner (buckle) deployment, time to fire, driver (msec)	11.0
Pretensioner (retractor) deployment, time to fire, driver (msec)	6.0
Frontal airbag deployment, time to first stage deployment, front passenger (msec)	N/A
Frontal airbag deployment, time to 2nd stage, front passenger (msec)	N/A
Side curtain airbag deployment, time to deploy, right side (msec)	N/A
Side (thorax) airbag deployment, time to deploy, right front passenger (msec)	N/A
Pretensioner (buckle) deployment, time to fire, right front passenger (msec)	N/A
Pretensioner (retractor) deployment, time to fire, right front passenger (msec)	N/A
Maximum delta-V, longitudinal (MPH[KPH])	-38.49 [-61.93]
Time, maximum delta-V longitudinal (msec)	130
Maximum delta-V, lateral (MPH[KPH])	-8.05 [-12.96]
Time, maximum delta-V lateral (msec)	76
Left, front satellite sensor discriminating deployment	No
Left, front satellite sensor safing	No
Left, middle satellite sensor discriminating deployment	No
Left, middle satellite sensor safing	No
Left, rear satellite sensor discriminating deployment	No
Left, rear satellite sensor safing	No
Right, front satellite sensor discriminating deployment	No
Right, front satellite sensor safing	No
Right, middle satellite sensor discriminating deployment	No
Right, middle satellite sensor safing	No
Right, rear satellite sensor discriminating deployment	No
Right, rear satellite sensor safing	No
RCM, side left sensor discriminating deployment	No
RCM, side left sensor safing	No
RCM, side right sensor discriminating deployment	No
RCM, side right sensor safing	No
Left or center front, satellite Sensor discriminating deployment	Yes
Left or center, front satellite Sensor safing	Yes
Right, front satellite sensor discriminating deployment	No
Right, front satellite sensor safing	Yes
RCM, front sensor discriminating deployment	Yes
RCM, front sensor safing	Yes
RCM, rear sensor discriminating deployment	No
RCM, rear sensor safing	No
RCM, rollover sensor discriminating deployment	No
RCM, rollover sensor safing	No
RCM, vertical sensor discriminating deployment	No
RCM, vertical sensor safing	No

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

Ignition cycle, crash	101
Frontal air bag warning lamp, on/off	OFF
Occupant size classification, front passenger	Empty
Frontal air bag suppression switch status, front passenger	N/A
Safety belt status, driver	Driver Buckled
Seat track position switch, foremost, status, driver	Not Forward
Safety belt status, front passenger	Passenger Not Buckled
Brake Telltale	Off
ABS Telltale	Off
Stability Control Telltale	Off
Speed Control Telltale	Off
Powertrain Wrench Telltale	Off
MIL Telltale	On
HEV Hazard Telltale	Off

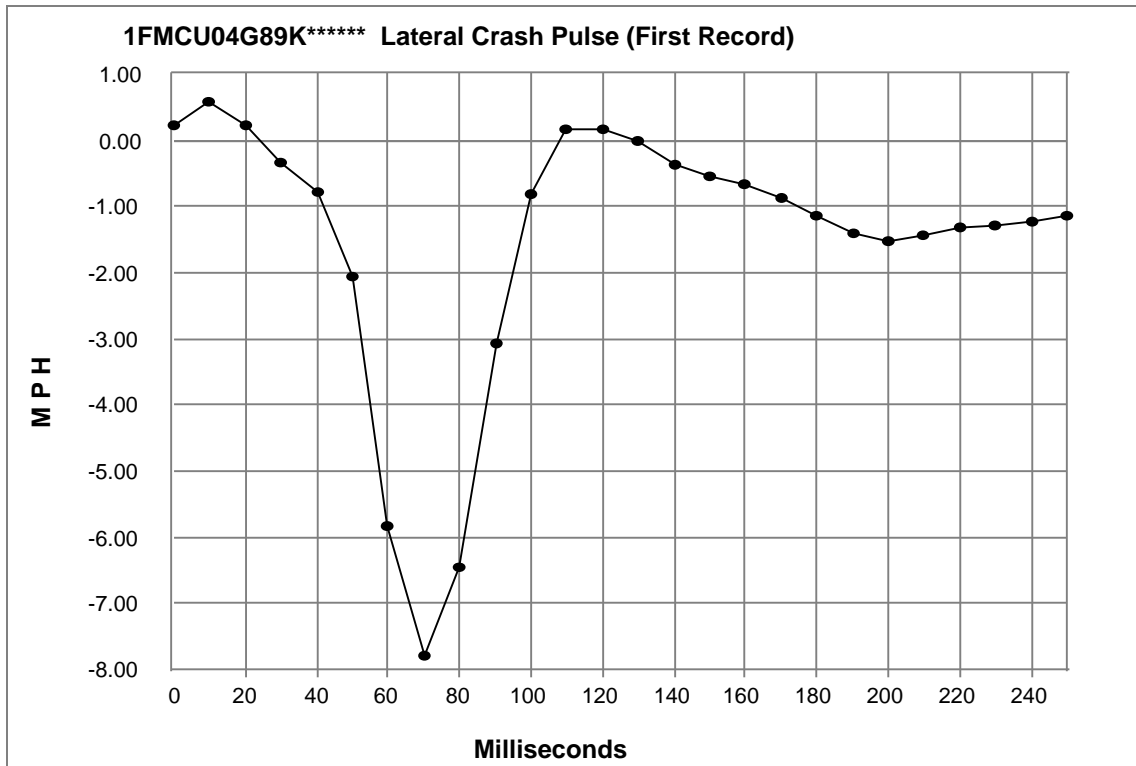
**Pre-Crash Data -5 to 0 sec [2 samples/sec] (First Record)**

Times (sec)	Speed vehicle indicated	Accelerator pedal, % full	Service brake, on/off	Engine rpm
- 5.0	36.0 [58.0]	0	OFF	0
- 4.5	37.3 [60.0]	0	OFF	0
- 4.0	37.9 [61.0]	0	OFF	0
- 3.5	38.5 [62.0]	0	OFF	0
- 3.0	39.2 [63.0]	0	OFF	0
- 2.5	39.2 [63.0]	0	OFF	0
- 2.0	39.2 [63.0]	0	OFF	0
- 1.5	39.2 [63.0]	0	OFF	0
- 1.0	39.2 [63.0]	0	OFF	0
- 0.5	39.2 [63.0]	0	OFF	0
0.0	39.2 [63.0]	0	OFF	0



**Longitudinal Crash Pulse (First Record)**

Time (msec)	Delta-V, longitudinal (MPH)	Delta-V, longitudinal (KPH)
0	-0.95	-1.53
10	-1.80	-2.90
20	-3.17	-5.09
30	-5.10	-8.21
40	-8.58	-13.80
50	-13.82	-22.24
60	-20.24	-32.56
70	-30.99	-49.86
80	-33.21	-53.43
90	-35.17	-56.59
100	-37.24	-59.91
110	-37.99	-61.13
120	-38.28	-61.58
130	-38.44	-61.85
140	-38.20	-61.46
150	-37.82	-60.85
160	-37.46	-60.27
170	-37.34	-60.08
180	-37.16	-59.80
190	-36.96	-59.46
200	-36.68	-59.02
210	-36.52	-58.77
220	-36.33	-58.46
230	-36.11	-58.11
240	-35.97	-57.87
250	-35.77	-57.55



**Lateral Crash Pulse (First Record)**

Time (msec)	Delta-V, lateral (MPH)	Delta-V, lateral (KPH)
0	0.22	0.35
10	0.59	0.95
20	0.22	0.36
30	-0.34	-0.55
40	-0.80	-1.28
50	-2.07	-3.34
60	-5.83	-9.38
70	-7.81	-12.56
80	-6.46	-10.40
90	-3.08	-4.96
100	-0.80	-1.29
110	0.17	0.27
120	0.16	0.26
130	-0.01	-0.01
140	-0.37	-0.59
150	-0.54	-0.87
160	-0.66	-1.07
170	-0.88	-1.42
180	-1.15	-1.85
190	-1.39	-2.24
200	-1.54	-2.47
210	-1.44	-2.32
220	-1.32	-2.12
230	-1.29	-2.08
240	-1.22	-1.97
250	-1.14	-1.83

## 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.

02 00 00 00

39 4C 38 34 2D 31 34 42 33 32 31 2D 41 4A 00 00 00 00 00 00 00 00 00 00

37 30 30 30 36 38 31 31 30 30 30 30 30 30 30

39 4C 33 34 2D 31 34 43 30 32 38 2D 41 4D 00 00 00 00 00 00 00 00 00 00

FF C6 44 2D 00 00 00 00 00 00 00 00 00 00 00

FF D3 EB 59 00 00 00 00 00 00 00 00 00 00 00

00 13 91 AA 00 00 00 00 00 00 00 00 00 00 00

FF C6 43 C6 00 00 00 00 00 00 00 00 00 00 00

FF CC 30 EA 00 00 00 00 00 00 00 00 00 00 00

FF C3 91 99 00 00 00 00 00 00 00 00 00 00 00

31 46 4D 43 55 39 33 37 39 39 4B 41 30 33 31 32 31

31 46 4D 43 55 39 33 37 39 39 4B 41 30 33 31 32 31 00 00 00 00 00 00 00





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## **Disclaimer of Liability**

The users of the CDR product and reviewers of the CDR reports and exported data shall ensure that data and information supplied is applicable to the vehicle, vehicle's system(s) and the vehicle ECU. Robert Bosch LLC and all its directors, officers, employees and members shall not be liable for damages arising out of or related to incorrect, incomplete or misinterpreted software and/or data. Robert Bosch LLC expressly excludes all liability for incidental, consequential, special or punitive damages arising from or related to the CDR data, CDR software or use thereof.