

On-Site Rollover Investigation
Dynamic Science, Inc. (DSI), Case Number DS10004
2007 Ford Explorer XLT
California
December 2009

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The crash investigation process is an inexact science which requires that physical evidence such as skid marks, vehicular damage measurements, and occupant contact points be coupled with the investigator's expert knowledge and experience of vehicle dynamics and occupant kinematics in order to determine the pre-crash, crash, and post-crash movements of involved vehicles and occupants.

Because each crash is a unique sequence of events, generalized conclusions cannot be made concerning the crashworthiness performance of the involved vehicle(s) or their safety systems.

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16. Abstract The focus of this investigation was the rollover dynamics of a 2007 Ford Explorer XLT involved in a single-vehicle crash and subsequent rollover. The vehicle was equipped with Electronic Stability Control (ESC), traction control, and roll stability control technology. The crash occurred on a four-lane divided eastbound interstate highway during December 2009 in the state of California. The Ford was being driven by a restrained 50-year-old male and was traveling eastbound in the third lane from the right when the driver lost control of the vehicle. The Ford departed the roadway on the left edge and its front end impacted a concrete traffic barrier. Following the impact the vehicle initiated a three quarter-turn right side leading turn-over type rollover, returned to the roadway, and came to rest on its left side and facing north in the inbound lane. After stabilization had occurred the Ford was involved vehicle-to-vehicle impact with a 2009 Chrysler PT Cruiser that was traveling eastbound in the inboard lane. As the driver of the Ford was waiting to exit his overturned vehicle the Chrysler impacted the Ford. At impact, the driver of the Ford was ejected from the vehicle and came to rest on the roadway. The driver of the Ford sustained incapacitating injuries resulting from the ejection and was transported to a local hospital. The Ford was towed due to damage and was later declared a total loss by the insurance company.					
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Dynamic Science, Inc.
Crash Investigation
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Background

The focus of this on-site investigation was the rollover dynamics of a 2007 Ford Explorer XLT (**Figure 1**) involved in a single-vehicle crash and subsequent rollover. The vehicle was equipped with Electronic Stability Control (ESC), traction control, and roll stability control technology intended to reduce the risk of a rollover. The crash occurred on a four-lane divided eastbound interstate highway during December 2009 in the state of California. The Ford was being driven by a restrained 50-year-old male.



Figure 1. Subject vehicle, 2007 Ford Explorer XLT

The Ford was traveling eastbound in the third lane from the right and the driver lost control of the vehicle. The Ford departed the roadway on the left edge and its front end impacted a concrete traffic barrier (Event 1). Following the frontal impact the vehicle initiated a three quarter-turn right side leading turn-over type rollover (Event 2), traveled back onto the roadway, and came to rest on its left side and facing north in the inbound lane.

After stabilization of Event 2 occurred a 2009 Chrysler PT Cruiser that was traveling eastbound in the inbound lane approached the Ford. As the driver of the Ford waited to exit his overturned vehicle the Chrysler impacted the Ford. At impact, the driver of the Ford was ejected from the vehicle and came to rest on the roadway. Per National Automotive Sampling System (NASS) coding conventions, the crash as it relates to this report concluded after the Event 2 rollover when the Ford came to rest and the event became stabilized.

The driver of the Ford sustained incapacitating injuries during the post-stabilization impact and subsequent ejection, and was transported to a local hospital. The Ford was towed due to damage and was later declared a total loss by the insurance company.

This on-site rollover investigation was identified by a DSI investigator from a review of auto auction vehicles. Photographs of the subject vehicle were forwarded to the National Highway Traffic Safety Administration (NHTSA) and on February 3, 2010 the case was assigned. The vehicle inspection was completed on February 12, 2010 at the auto auction facility. The Ford's Event Data Recorder (EDR) and Powertrain Control Module (PCM) were supported by the Bosch Crash Data Retrieval (CDR) system and the crash data was imaged during the vehicle inspection. The CDR crash data is summarized in this report and the Bosch reports with the hexadecimal data omitted are included in this report as Attachment 3.

Summary

Crash Site

The crash occurred in an eastbound four-lane divided interstate highway. The travel lanes each measured 3.7 m (12.0 ft) in width and were straight, level, and composed of concrete. An inboard asphalt shoulder and ascending dirt embankment measured 4.6 m (15.0 ft) in width and they terminated at a concrete traffic barrier measuring approximately 1.0 m (3.3 ft) in height. The posted speed limit at the crash site was 105 km/h (65 mph). At the time of the crash, conditions were cloudy, raining, and dark with streetlight illumination. Based on the police report and the driver interview there was standing water on the roadway at the time of the crash.



Figure 2. Pre-crash approach to impact, subject vehicle

Pre-Crash

The Ford was traveling eastbound in the third lane from the right (**Figure 2**) and decelerated prior to impact. The Ford's EDR-reported speed was 106.6 km/h (66.2 mph) at 5 seconds prior to Algorithm Enable (AE) and 56.4 km/h (35.1 mph) at 1 second prior to AE. The driver stated during the interview that he was driving through standing water and the vehicle's tires lost traction due to hydroplaning. The likelihood of hydroplaning was probably increased due to the low tire pressure of the vehicle's right rear tire. The driver lost control of the vehicle, it initiated a counterclockwise rotation, and then departed the roadway on the left edge. He braked without lockup and steered right to counteract the rotational forces. The vehicle traveled across the asphalt shoulder and dirt embankment.

Crash

The crash sequence included two events. Event 1 was a frontal impact to a concrete traffic barrier resulting in minor damage. Event 2 was a right side leading turn-over type rollover during which the Ford rolled three quarter-turns, returned to the roadway, and came to rest on its left side and facing north in the inboard lane.

After stabilization occurred the driver of the Ford was waiting to exit his overturned vehicle and the front end of the Chrysler impacted the roof and hood areas of the Ford's top plane. At impact, the driver of the Ford was ejected from the vehicle and came to rest on the roadway. Additionally, the Ford rotated clockwise approximately 180 degrees from its original at-rest orientation; its final at-rest orientation was south-facing.

The driver of the Ford came to rest approximately 7.6 m (25.0 ft) southeast of the vehicle. He sustained incapacitating injuries resulting from contact with the subject vehicle and roadway and was

transported to a local hospital and admitted for seven days.

For the Ford in Event 1, the Barrier algorithm of WinSMASH calculated a Total Delta-V of 7.0 km/h (4.3 mph); the longitudinal and lateral components were -2.4 km/h (-1.5 mph) and -6.6 km/h (-4.1 mph), respectively. The results appear reasonable based on the vehicle's crush profile and post-crash trajectory.

Post-Crash

Following the rollover, the Ford came to rest on its left side in the inboard lane. The driver unbuckled his safety belt and opened the front right side door without assistance and climbed onto the center console. While standing on the console with his head and shoulders outside of the vehicle, he waited for approaching traffic to pass before exiting the vehicle. The eastbound Chrysler traveling the inboard lane then impacted the Ford.

The driver of the Ford was ejected from the vehicle and displaced onto the roadway. He stated during the interview that he sustained a momentary loss of consciousness and regained consciousness while still in the roadway as he was being attended to by on-scene responders. He was then transported by ground to a local hospital where he was admitted to the emergency room approximately 30 minutes post-crash at 0000 hours. The driver was assigned a Glasgow Coma Score (GCS) of 15 and was admitted at 0350 hours. His injuries were of minor to moderate severity and included multiple fractures, dislocations, and abrasions.

The driver was released from the hospital after seven days and received in-home physical therapy treatment for five weeks. During the inpatient treatment and physical therapy he missed approximately 30 days from work due to his injuries.

Vehicle Data

The Ford was identified by the Vehicle Identification Number (VIN): 1FMEU63E67Uxxxxxx and the date of manufacture was April 2007. The odometer reading was unknown due to the inoperable electronic control panel, and the driver-estimated mileage was 64,372 km (40,000 mi). The vehicle was equipped with a 4.0-liter, 6-cylinder engine, automatic transmission, 4-wheel drive, electronic power steering with tilt column functionality, a tire pressure monitoring system, and daytime running lights. The braking and suspension systems included 4-wheel anti-lock brakes, Assisted Braking System (ABS), Electronic Stability Control (ESC), traction control, and roll stability control.

The vehicle manufacturer recommended P235/70R16 tires for the front and rear and a cold tire pressure of 241 kPa (35 psi) for the front and rear. The vehicle was equipped with Goodyear Integrity P235/70R16 tires on the front and rear that were manufactured in October 2008. The specific tire information was as follows:

Position	Measured Pressure	Measured Tread Depth	Restricted	Damage
LF	165 kPa (24 psi)	8 mm (10/32 in)	Yes	None
LR	207 kPa (30 psi)	6 mm (8/32 in)	No	None
RR	117 kPa (17 psi)	5 mm (6/32 in)	No	None
RF	200 kPa (29 psi)	9 mm (11/32 in)	No	None

The Ford's interior was equipped with leather-covered five-passenger seating. The front row outboard bucket seats were equipped with adjustable head restraints and were separated by a center console. The second row 60/40 split bench seat with folding backs was equipped with adjustable head restraints for the outboard positions.

Vehicle Damage

Exterior Damage

The Ford sustained direct and induced damage to the front end resulting from the frontal impact; and direct and induced damage to the left, right, and top planes damage during the rollover. Roof crush resulting from the rollover was masked by the damage from the vehicle-to-vehicle impact, which was greater in magnitude. The left side wheelbase was reduced by 12.0 cm (4.7 in) and the left front tire was restricted and displaced to a 15.0 cm (5.9 in) inboard cant.

Direct damage to the front end began at the left front bumper corner and extended 54.0 cm (21.3 in) to the right. The Field L was distributed from bumper corner to bumper corner and measured 170.0 cm (66.9 in) (**Figure 3**). Six crush measurements were taken at the bumper level as follows: $C_1 = 3.0$ cm (1.2 in), $C_2 = 3.0$ cm (1.2 in), $C_3 = 2.0$ cm (0.8 in), $C_4 = 1.0$ cm (0.4 in), $C_5 = 1.0$ cm (0.4 in), $C_6 = 0$ cm. Maximum crush was located at C_1 . The Collision Deformation Classification (CDC) for the frontal impact was 02FDLW1.



Figure 3. Front end crush profile measurement

Direct damage to the left side began 82.0 cm (32.3 in) aft of the rear axle, extended forward 432.0 cm (170.0 in), and ended at the left front bumper corner. The damage was distributed vertically from the sill to the roof side rail and measured 134.0 cm (52.8 in). Direct damage to the right side began 29.0 cm (11.4 in) aft of the rear axle, extended forward 366.0 cm (144.1 in), and ended 49.0 cm (19.3 in) forward of the front axle. The damage was distributed vertically from the sill to the roof side rail

and measured 134.0 cm (52.8 in). Direct damage to the top plane began on the roof at 58.0 cm (22.8 in) aft of the rear axle, extended forward 291.0 cm (114.5 in), and ended at the leading edge of the hood. The damage was distributed laterally from roof side rail to roof side rail and measured 131.0 cm (51.8 in). The maximum lateral crush to the greenhouse was located on the left roof side rail at 120.0 cm (47.2 in) aft of the front axle and measured 8.0 cm (3.1 in) (**Figure 4**). The maximum vertical crush from the rollover was masked by the vehicle-to-vehicle impact and was not determined. The CDC for the Event 2 rollover was 00TDDO99.



Figure 4. Maximum lateral crush measurement, left roof side rail

For informational purposes, the damage to the Ford sustained in the vehicle-to-vehicle impact was measured. For the Ford, the direct damage from the vehicle-to-vehicle impact began on the roof at 120.0 cm (47.2 in) of the rear axle, extended 188.0 cm (74.0 in) forward, and ended on the hood. The damage to the roof was distributed laterally beginning 29.0 cm (11.4 in) inboard of the left roof side rail and extending 106.0 cm (41.7 in) to the right roof side rail. Maximum roof crush from the vehicle-to-vehicle impact was located on the left windshield header and measured 43.0 cm (16.9 in). The CDC for the vehicle-to-vehicle impact was 00TDYW4.

Interior Damage

The Ford sustained interior damage resulting from intrusion and occupant loading. The windshield was fractured and had separated from the windshield header and A-pillars due to heat-induced sag. The left front, left rear, left rearmost, and right front side glass were disintegrated resulting in integrity loss. The left side doors were jammed shut and the right front door would not latch due to deformation. The passenger compartment area was reduced in size as a result of lateral intrusion of the left A-pillar, longitudinal intrusion of the instrument panel (IP), and vertical intrusion of the windshield header, IP, and roof. The driver's safety belt components and the center console revealed occupant load marks.

Manual Restraints

The Ford was equipped with manual 3-point lap and shoulder safety belts for the five seating positions. All the safety belts utilized continuous loop webbing and sliding latch plates. The front row safety belts were equipped with adjustable D-rings and dual position buckle/retractor pretensioners. The driver's safety belt had an Emergency Locking Retractor (ELR) and the front right passenger's safety belt had a switchable ELR/Automatic Locking Retractor (ALR).

The driver's safety belt D-ring anchorage was in the middle position and the latch plate was scratched indicating historical usage. The safety belt retractor was functional and there was no evidence of pretensioner actuation. The buckle stalk measured 22.0 cm (8.7 in) and the buckle

pretensioner did not actuate during the crash.

The driver's safety belt latch plate was scuffed as a result of occupant loading (**Figure 5**). The safety belt webbing was scuffed at 2.0 cm (0.8 in), 7.0 cm (2.8 in), 13.0 cm (5.1 in), and 14.0 cm (5.5 in) below the stop button. Beginning 29.0 cm (11.4 in) above the stop button a stretched area of webbing measured 11.0 (4.3 in) in length. Based on evidence of occupant loading, it was determined that the safety belt was used to restrain the driver during the crash.

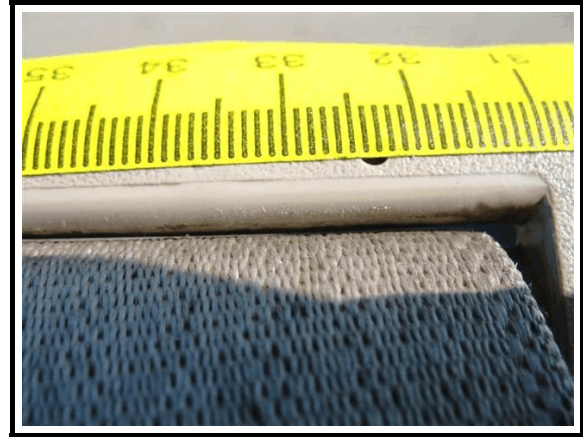


Figure 5. Driver's safety belt latch plate showing evidence of occupant loading

The front row passenger's safety belt D-ring anchorage was set to the full-up position and the latch plate was scratched indicating historical usage. The buckle stalk measured 22.0 cm (8.7 in) and there was no evidence of buckle pretensioner actuation. The safety belt was in the stowed position due to damage the retractor would not unspool.

The second row seats were equipped with 3-point manual lap and shoulder belts for the outboard positions. The safety belts were equipped with ELR/ALR retractors, sliding latch plates, and non-adjustable D-ring anchorages. The second row safety belts latch plates were scratched and the webbing was worn indicating historical usage.

Supplemental Restraint System

The vehicle's Supplemental Restraint System (SRS) included an air bag control module (ACM), driver and passenger frontal air bags, seat-mounted side air bags for the front row, and safety belt pretensioners for the front row. The driver stated during the interview that the vehicle had been in no previous crashes, the air bags were original to the vehicle, and they had not been recalled or serviced.

The Ford was a Certified Advanced 208-Compliant (CAC) vehicle. A CAC vehicle is certified by the manufacturer to be compliant with the Advanced Air Bag portion of Federal Motor Vehicle Safety Standard (FMVSS) No. 208. The Ford's advanced dual-stage frontal air bags were designed to deploy according to impact severity. The frontal air bags and the seat-mounted side air bags did not deploy in the crash and the front row safety belt pretensioners did not actuate.

Event Data Recorder

The Ford's EDR data was collected using the Bosch CDR Tool version 3.3 and was reported using version 3.5.1. Two modules were used to recover the recorded data: the ACM and the Powertrain Control Module (PCM). The PCM records Restraint Deployment Signal (RDS), Vehicle Speed, Accelerator Pedal Percent Full, Engine Throttle Percent Full, Brake Switch status, Brake Stability Control Deactivation status, ABS status, Transmission setting, Speed Control status, Engine RPM, Driveline Torque, Traction Control status, and Stability Control status. When an RDS is sent to the

PCM, the data is locked. If the PCM receives no RDS, the data will not lock and there may or may not be recorded data relevant to the crash, depending on whether power was lost during or shortly after the collision. In this incident, one pretensioner actuated and an RDS should have been sent to the PCM. The report indicated that no RDS signal was received; consequently, no data was saved in the PCM.

The ACM recorded three non-deployment events and each were defined as Side Events. Each reported event contained 58 milliseconds (msec) of recorded data. The EDR was not configured for rollover event detection. The Pre-Crash Data for the first and second events was identical. The recorded data from the ACM was summarized as follows:

- Driver belt switch circuit status at the start of the event was “Buckled.”
- Driver seat position at the start of the event was “Not Forward.”
- Passenger belt switch circuit status at the start of the event was “Unbuckled.”
- Warning lamp command at the start of the event was “Off.”
- Accelerator Pedal Percent was 0.
- Vehicle speed was 106.6 km/h (66.2 mph) at the start of the First Record and 36.3 km/h (22.5 mph) at the end of the Third Record.
- ABS event in progress was “Yes” from 6 through 1 seconds prior to AE.
- Traction Control System (TCS) engine event in progress was “Yes” at 4 seconds prior to AE and “No” at all other recorded intervals.
- TCS brake event in progress was “No” at all recorded intervals.
- Brake depressed status was “Yes” at 4 seconds prior to AE in the First Record and “No” at 2 seconds prior to AE in the Third Record.
- Occupant Classification Sensor (OCS) status for the front right passenger seat was “Empty.”
- The maximum cumulative vehicle lateral velocity change in the First Record was -3.01 km/h (-1.87 mph) at 58 msec.
- The maximum cumulative vehicle lateral velocity change in the Second Record was -0.64 km/h (-0.40 mph) at 58 msec.
- The maximum cumulative vehicle lateral velocity change in the Third Record was -0.35 km/h (-0.22 mph) at 32 msec.

Rollover

The Ford had a Static Stability Factor (SSF) rating of 1.14. The SSF of a vehicle is an at-rest calculation of its rollover resistance, which is based on its track width and center of gravity. The vehicle had a rollover resistance rating of 3 out of 5 stars and had a 22 percent chance of rollover.¹ It was equipped with 4-wheel drive, power steering with tilt column functionality, a tire pressure monitoring system, 4-wheel anti-lock brakes, Assisted Braking System (ABS), Electronic Stability Control (ESC), roll stability control, and traction control technologies designed to mitigate the chance of rollover and enhance the effectiveness of the vehicle’s steering and braking dynamics.

¹ www.safercar.gov

The vehicle's ESC and roll stability control features used a system of gyroscopic roll sensors to determine its roll angle and roll rate. When activated, the system initiates countermeasures such as reducing engine power by 15 percent and applying braking to one or more tires. Additionally, a yaw control system detects under- or oversteer, and then modifies engine power and brake input to correct the vehicle's rotational dynamic.²

The Ford was traveling eastbound on a wet concrete roadway at an EDR-reported speed of 106.6 km/h (66.2 mph). The vehicle departed the roadway and its front bumper impacted the concrete traffic barrier. At impact with the barrier, the vehicle's front tires were on the ascending dirt embankment and the rear tires were on the asphalt shoulder. In response to the frontal impact and its the vehicle's orientation it initiated a right side leading turn-over type rollover.

The vehicle rolled about its longitudinal axis for three quarter-turns and then came to final rest on its left side and facing north in the two inboard travel lanes. Based on the number of quarter-turns and the vehicle's final rest location, the vehicle's estimated roll distance was 15.0 m (49.0 ft).

The EDR's Pre-Crash Data indicated that the vehicle's ABS, Traction Control system, and brakes were engaged at impact. The vehicle's loss of traction, its rotational forces, changes in surface composition, and the frontal impact mitigated the vehicle's stability and roll control technologies ability to prevent the rollover.

Occupant Demographics

Driver

Age/Sex:	50 years/Male
Height:	191 cm (75 in)
Weight:	127 kg (280 lb)
Seat type:	Bucket with adjustable head restraint
Seat track position:	Rear-track
Manual restraint usage:	Lap and shoulder belt used
Usage source:	Vehicle inspection
Air bags:	Frontal air bag, seat-mounted side air bag; not deployed
Alcohol, drug involvement:	None
Type of medical treatment:	Transported and hospitalized

² Mediaford.com, AdvanceTrac With Roll Stability Control - The Ford Advantage

Occupant Kinematics

Driver

The 50-year-old male driver was seated in an upright posture and was restrained by the vehicle's lap and shoulder belt that was and properly adjusted and positioned. The driver's safety belt revealed load marks on the latch plate and lap and shoulder portions of the webbing. His hands were placed on the steering wheel at the 10 and 4 o'clock positions. The driver's seat track was set to the rear position and his seat back was slightly reclined. His right foot was initially on the accelerator but the EDR reported an Accelerator Pedal percentage of 0 during the seven seconds of recorded Pre-Crash Data. Six seconds prior to AE, the driver braked without lockup and he steered right to counteract the vehicle's counterclockwise yaw.

At impact with the wall, the driver was held in place in his seat by the vehicle's safety belt and the ELR retractor. The frontal impact was a low Delta-V event and had a minor effect on the driver's kinematics. The vehicle then initiated a right side leading rollover and rolled three quarter-turns. During the first quarter-turn the driver was displaced to the right and loaded the vehicle's lap and shoulder belt. His right hip loaded the safety belt buckle and the center console depositing scuffs to both components. During the second and third quarter-turns, the driver was held in place in his seat by the safety belt and based on the vehicle inspection and the interview his extremities did not contact or load any components resulting in injury or vehicle damage.

When the vehicle came to rest, the driver unbuckled his safety belt and opened the front row right side door. The Ford was at rest on its left side and facing north in the inboard lane. He stood on the center console with his head and shoulders outside of the vehicle as he waited for vehicles to pass before he exited the vehicle. The driver stated during the interview that while exiting the vehicle he was alert and not aware of any pain or injuries.

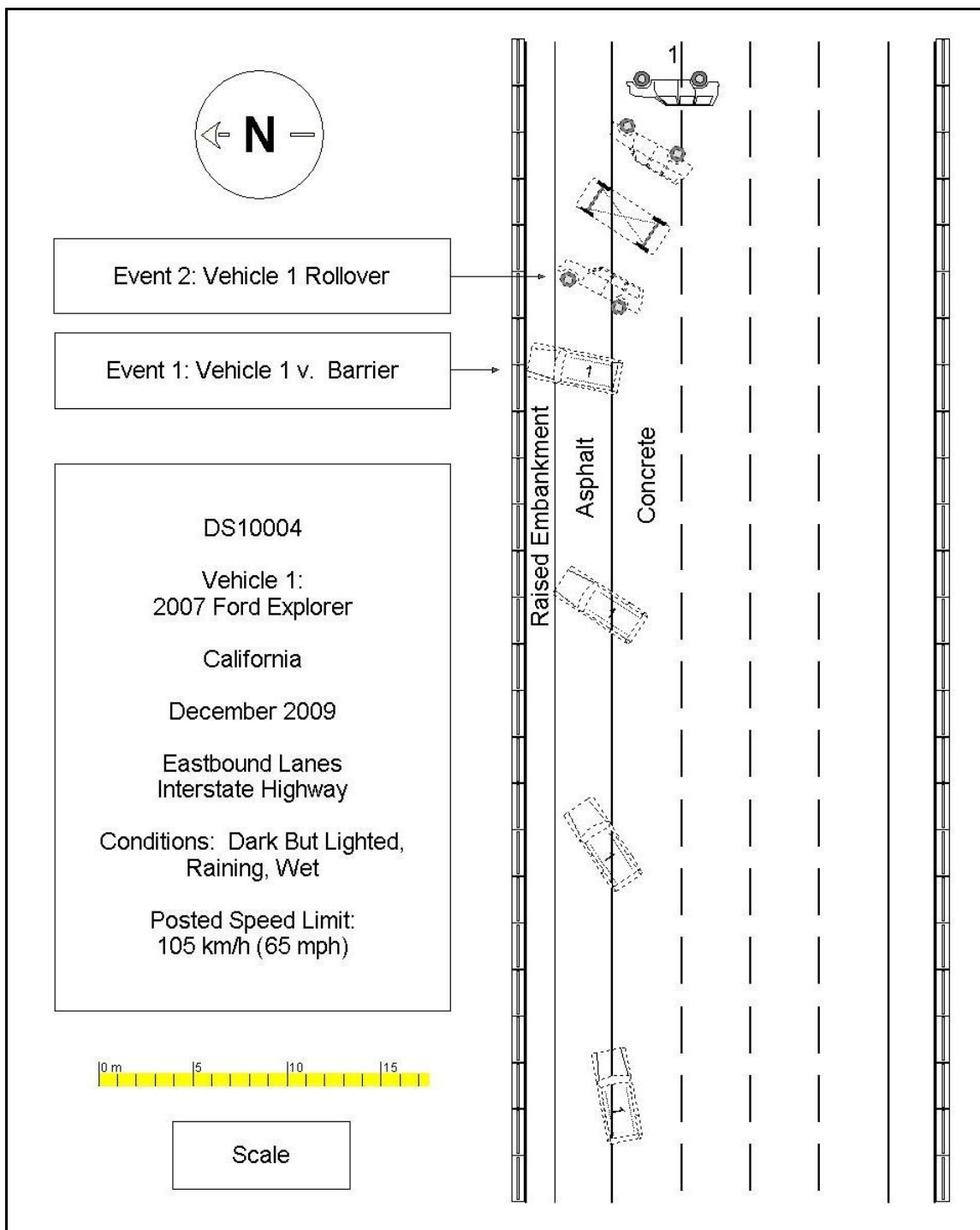
The driver observed the Chrysler approaching in the inboard lane and he realized it would impact the Ford. At impact, the driver of the Ford was ejected approximately 7.6 m (25.0 ft) from its at-rest location. The driver contacted the roadway primarily on his right side. He sustained abrasions to his scalp, abdomen, knees, and lower legs; he sustained fractures to his lumbar vertebra and pelvis; and he sustained a dislocation of his right hip. The driver reported a partial permanent vision loss resulting from a closed head injury.

Occupant Injuries

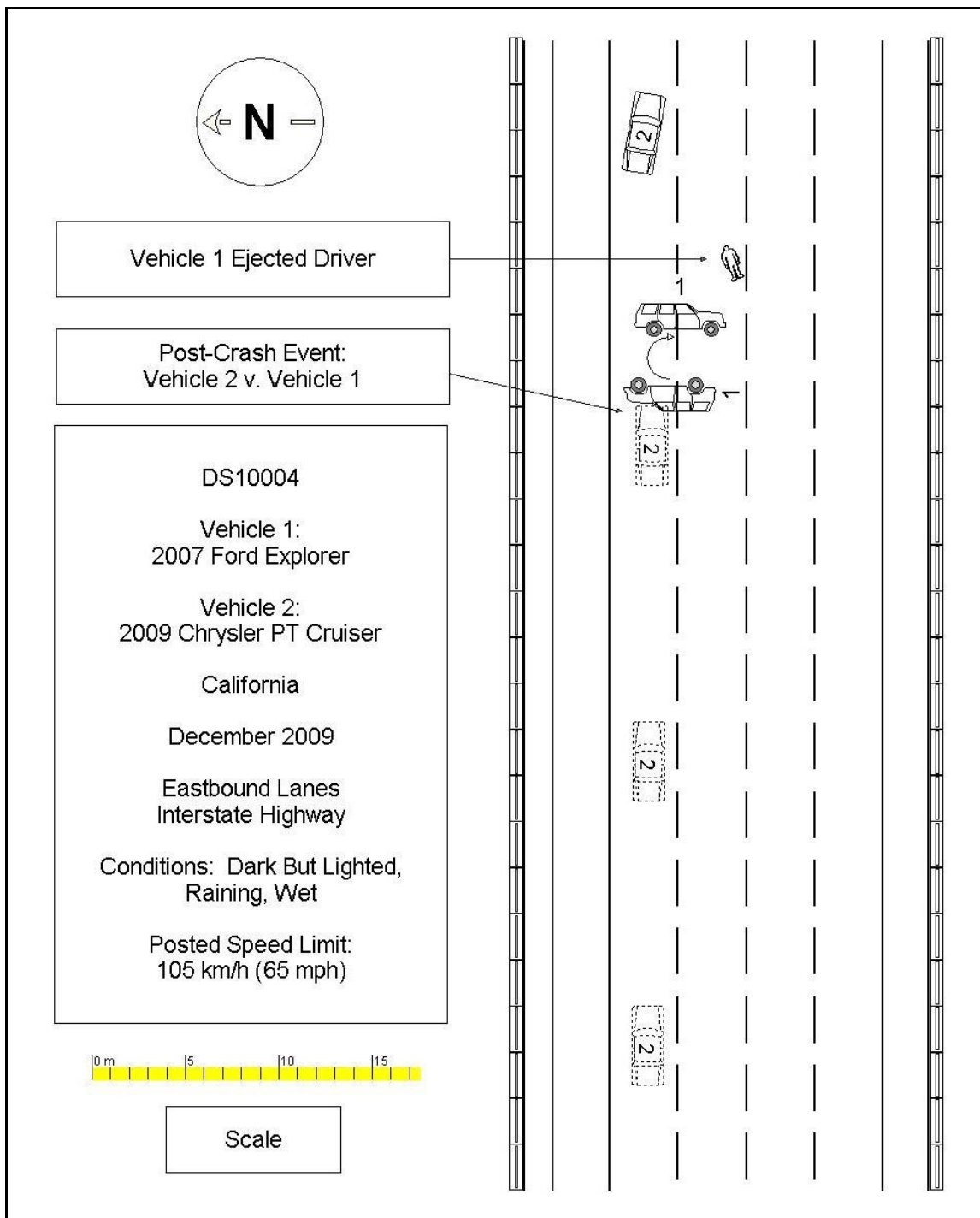
Driver

The injury data was obtained from the driver's medical records and the interview. The driver sustained minor to moderated severity injuries during the vehicle-to-vehicle impact and the ejection. He stated during the interview that the frontal impact and rollover did not result in any injuries. His injuries included abrasions to the scalp, abdomen, and lower extremities, dislocation of the left hip, fracture of the L1-L4 transverse process, and fracture of the pelvis. The driver's injuries were not coded since they occurred subsequent to stabilization following Event 2.

Attachment 1. Scene Diagram



Attachment 2. Scene Diagram



Attachment 3. Bosch CDR Reports

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	1FMEU63E67U*****
User	
Case Number	
EDR Data Imaging Date	
Crash Date	
Filename	10004 ACM WO VIN.CDR
Saved on	Friday, February 12 2010 at 09:16:06 AM
Collected with CDR version	Crash Data Retrieval Tool 3.3
Reported with CDR version	Crash Data Retrieval Tool 3.5.1
EDR Device Type	airbag control module
ACM Adapter Detected During Download	No
Event(s) Recovered	Side event, Side event, Side event

Comments

No comments entered.

Data Limitations

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 Friday, February 12 2010 at 09:16:06 AM .

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 three deployment events.

AIRBAG CONTROL 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.
- If power to the Airbag Module is lost during a crash event, all or part of the crash record may not be recorded.

AIRBAG CONTROL 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.

02008_RCM-RC5_r001

System Status at Time of Retrieval

Current lifetime operating timer (sec)	6,820,385
Deployment command counter	0
Restraints Control Module Part Number	7L24-14B321-CA
Restraints Control Module Serial Number	0000008231123501
RCM Software Version	Rev Level 7 of 29 July 2005

System Configuration at Time of Retrieval

Configured for driver airbag, stage one	Yes
Configured for passenger airbag, stage one	Yes
Configured for driver airbag, stage two	Yes
Configured for passenger airbag, stage two	Yes
Configured for driver retractor pretensioner	Yes
Configured for passenger retractor pretensioner	Yes
Configured for driver pretensioner	Yes
Configured for passenger pretensioner	Yes
Configured for driver side thorax airbag	Yes
Configured for passenger side thorax airbag	Yes
Configured for driver side curtain	Yes
Configured for passenger side curtain	No
Configured for driver adaptive load limiter	Yes
Configured for passenger adaptive load Limiter	Yes
Configured for driver adaptive vent	Yes
Configured for passenger adaptive vent	Yes
Configured for driver front satellite sensor	Yes
Configured for passenger front satellite sensor	Yes
Configured for driver side, row 1 satellite sensor	Yes
Configured for passenger side row 1 satellite sensor	Yes
Configured for driver side row 2 satellite sensor	No
Configured for passenger side row 2 satellite sensor	No
Configured for driver seat track position sensor	Yes
Configured for driver seat belt buckle sensor	Yes
Configured for passenger seat belt buckle sensor	Yes
Configured for airbag cut off sensor	No
Configured for side event detection	Yes
Configured for roll over event detection	No
Configured for OCS	Yes
Configured for driver belt minder	Yes
Configured for passenger belt minder	Yes
Configured for passenger airbag disable indicator	Yes
Configured for emergency notification system	No
Configured for fuel cut off system	No

Deployment Data (First Record)

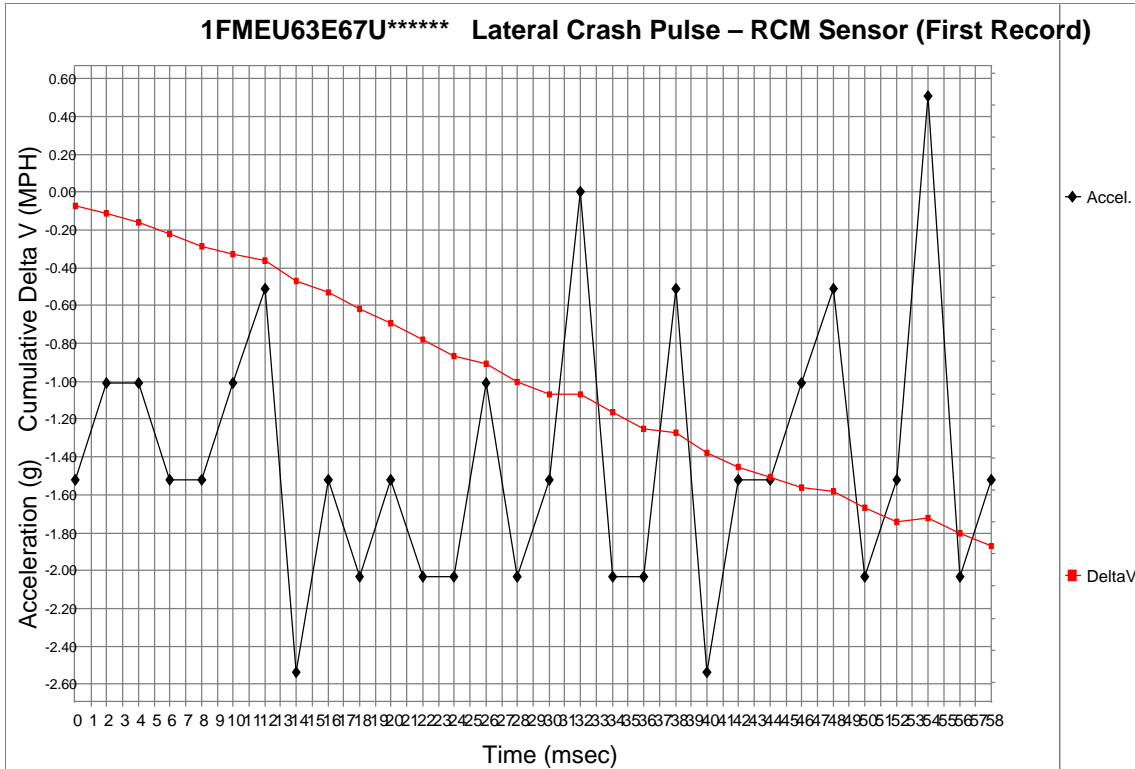
Contains No Recorded Data

System Status at Event (First Record)

Life time operating timer at start of event (sec)	6,820,345
Key on timer at start of event (sec)	3,490
Driver belt switch circuit status at start of event	Buckled
Driver seat position at start of event	Not Forward
Passenger belt switch circuit status at start of event	Unbuckled
Last passenger OCS classification at start of event	Empty
Battery less than 10 volts at start of event	No
Battery greater than 16 volts at start of event	No
Warning lamp command at start of event	Off
CAN OCS message missing at start of event	No
Driver B-pillar satellite sensor faulted at start of event	No
Driver C-pillar satellite sensor faulted at start of event	No
Passenger B-pillar satellite sensor faulted at start of event	No
Passenger C-pillar satellite sensor faulted at start of event	No
Driver front satellite sensor faulted at start of event	No
Passenger front satellite sensor faulted at start of event	No
PADI lamp faulted at start of event	No
Warning lamp faulted at start of event	No
Energy reserve faulted at start of event	No

Pre-Crash Data (First Record)

Time (sec)	-5	-4	-3	-2	-1
Accelerator Pedal (%)	0	0	0	0	0
Vehicle speed (MPH [km/h])	66.2 [106.6]	55.7 [89.6]	45.9 [73.8]	44.8 [72.2]	35.1 [56.4]
ABS event in progress	No	Yes	Yes	Yes	Yes
TCS engine event in progress	No	No	No	Yes	No
TCS brake event in progress	No	No	No	No	No
Brake depressed	No	Yes	Yes	Yes	Yes
IVD Event in Progress	Yes	Yes	Yes	Yes	No
OCS classification	Empty	Empty	Empty	Empty	Empty



Lateral Crash Pulse - RCM Sensor (First Record)

Time (msec)	RCM recorded vehicle lateral acceleration (g)	Cumulative vehicle lateral velocity change (MPH [km/h])
0	-1.52	-0.07 [-0.11]
2	-1.01	-0.11 [-0.18]
4	-1.01	-0.16 [-0.26]
6	-1.52	-0.22 [-0.35]
8	-1.52	-0.29 [-0.47]
10	-1.01	-0.33 [-0.53]
12	-0.51	-0.36 [-0.58]
14	-2.54	-0.47 [-0.76]
16	-1.52	-0.53 [-0.85]
18	-2.03	-0.62 [-1.00]
20	-1.52	-0.69 [-1.11]
22	-2.03	-0.78 [-1.26]
24	-2.03	-0.87 [-1.40]
26	-1.01	-0.91 [-1.46]
28	-2.03	-1.00 [-1.61]

Time (msec)	RCM recorded vehicle lateral acceleration (g)	Cumulative vehicle lateral velocity change (MPH [km/h])
30	-1.52	-1.07 [-1.72]
32	0.00	-1.07 [-1.72]
34	-2.03	-1.16 [-1.87]
36	-2.03	-1.25 [-2.01]
38	-0.51	-1.27 [-2.04]
40	-2.54	-1.38 [-2.22]
42	-1.52	-1.45 [-2.33]
44	-1.52	-1.51 [-2.43]
46	-1.01	-1.56 [-2.51]
48	-0.51	-1.58 [-2.54]
50	-2.03	-1.67 [-2.69]
52	-1.52	-1.74 [-2.80]
54	0.51	-1.72 [-2.77]
56	-2.03	-1.80 [-2.90]
58	-1.52	-1.87 [-3.01]

Lateral Crash Pulse - Satellite Sensors (First Record)

Time (msec)	RCM recorded driver side B pillar satellite acceleration (g)	RCM recorded passenger side B pillar satellite acceleration (g)	RCM recorded driver side C pillar satellite acceleration (g)	RCM recorded passenger side C pillar satellite acceleration (g)
0	37.44	0.00	0.00	0.00
2	-64.48	0.00	0.00	0.00
4	43.68	2.08	0.00	0.00
6	0.00	2.08	0.00	0.00
8	-24.96	2.08	0.00	0.00
10	10.40	2.08	0.00	0.00
12	-18.72	2.08	0.00	0.00
14	37.44	0.00	0.00	0.00
16	-22.88	0.00	0.00	0.00
18	24.96	4.16	0.00	0.00
20	-47.84	4.16	0.00	0.00
22	27.04	4.16	0.00	0.00
24	-16.64	0.00	0.00	0.00
26	-4.16	2.08	0.00	0.00
28	-6.24	2.08	0.00	0.00
30	22.88	4.16	0.00	0.00
32	-39.52	6.24	0.00	0.00
34	52.00	4.16	0.00	0.00
36	-54.08	2.08	0.00	0.00
38	47.84	0.00	0.00	0.00
40	-29.12	0.00	0.00	0.00
42	10.40	2.08	0.00	0.00
44	-8.32	2.08	0.00	0.00
46	-20.80	0.00	0.00	0.00
48	14.56	0.00	0.00	0.00
50	18.72	2.08	0.00	0.00
52	-10.40	2.08	0.00	0.00
54	0.00	4.16	0.00	0.00
56	4.16	2.08	0.00	0.00
58	-8.32	0.00	0.00	0.00

Deployment Data (Second Record)

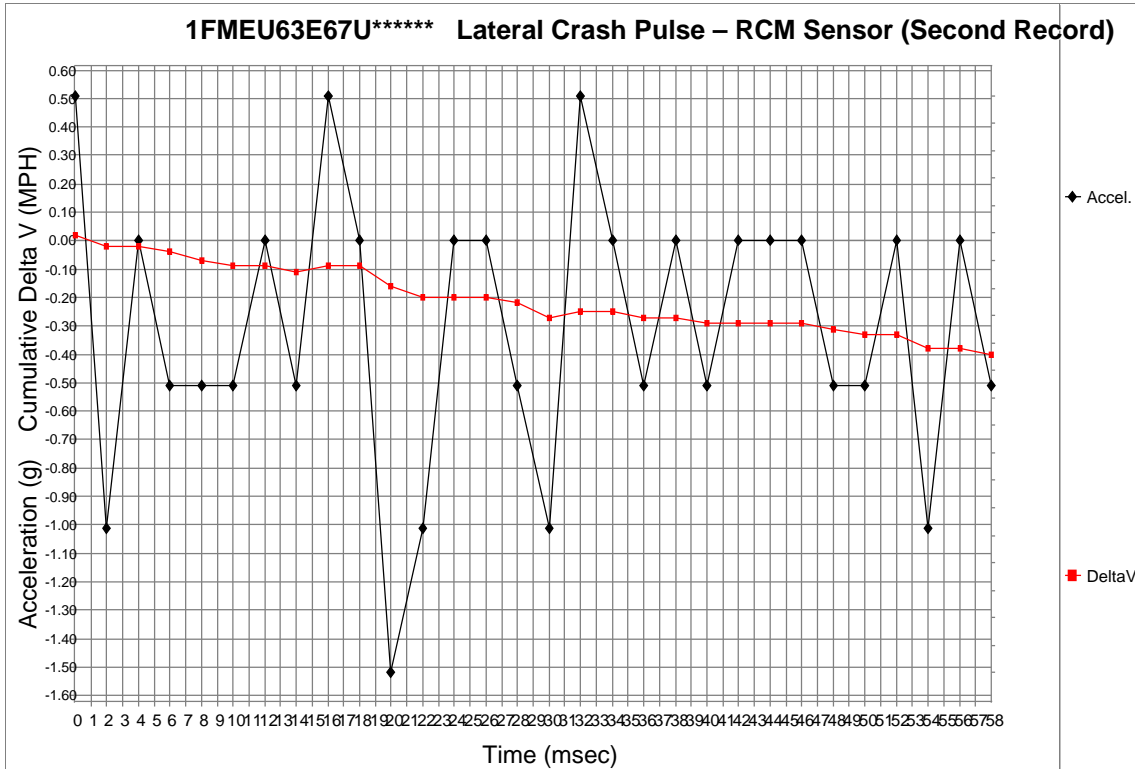
Contains No Recorded Data

System Status at Event (Second Record)

Life time operating timer at start of event (sec)	6,820,345
Key on timer at start of event (sec)	3,490
Driver belt switch circuit status at start of event	Buckled
Driver seat position at start of event	Not Forward
Passenger belt switch circuit status at start of event	Unbuckled
Last passenger OCS classification at start of event	Empty
Battery less than 10 volts at start of event	No
Battery greater than 16 volts at start of event	No
Warning lamp command at start of event	Off
CAN OCS message missing at start of event	No
Driver B-pillar satellite sensor faulted at start of event	No
Driver C-pillar satellite sensor faulted at start of event	No
Passenger B-pillar satellite sensor faulted at start of event	No
Passenger C-pillar satellite sensor faulted at start of event	No
Driver front satellite sensor faulted at start of event	No
Passenger front satellite sensor faulted at start of event	No
PADI lamp faulted at start of event	No
Warning lamp faulted at start of event	No
Energy reserve faulted at start of event	No

Pre-Crash Data (Second Record)

Time (sec)	-5	-4	-3	-2	-1
Accelerator Pedal (%)	0	0	0	0	0
Vehicle speed (MPH [km/h])	66.2 [106.6]	55.7 [89.6]	45.9 [73.8]	44.8 [72.2]	35.1 [56.4]
ABS event in progress	No	Yes	Yes	Yes	Yes
TCS engine event in progress	No	No	No	Yes	No
TCS brake event in progress	No	No	No	No	No
Brake depressed	No	Yes	Yes	Yes	Yes
IVD Event in Progress	Yes	Yes	Yes	Yes	No
OCS classification	Empty	Empty	Empty	Empty	Empty



Lateral Crash Pulse - RCM Sensor (Second Record)

Time (msec)	RCM recorded vehicle lateral acceleration (g)	Cumulative vehicle lateral velocity change (MPH [km/h])	Time (msec)	RCM recorded vehicle lateral acceleration (g)	Cumulative vehicle lateral velocity change (MPH [km/h])
0	0.51	0.02 [0.03]	30	-1.01	-0.27 [-0.43]
2	-1.01	-0.02 [-0.03]	32	0.51	-0.25 [-0.40]
4	0.00	-0.02 [-0.03]	34	0.00	-0.25 [-0.40]
6	-0.51	-0.04 [-0.06]	36	-0.51	-0.27 [-0.43]
8	-0.51	-0.07 [-0.11]	38	0.00	-0.27 [-0.43]
10	-0.51	-0.09 [-0.14]	40	-0.51	-0.29 [-0.47]
12	0.00	-0.09 [-0.14]	42	0.00	-0.29 [-0.47]
14	-0.51	-0.11 [-0.18]	44	0.00	-0.29 [-0.47]
16	0.51	-0.09 [-0.14]	46	0.00	-0.29 [-0.47]
18	0.00	-0.09 [-0.14]	48	-0.51	-0.31 [-0.50]
20	-1.52	-0.16 [-0.26]	50	-0.51	-0.33 [-0.53]
22	-1.01	-0.20 [-0.32]	52	0.00	-0.33 [-0.53]
24	0.00	-0.20 [-0.32]	54	-1.01	-0.38 [-0.61]
26	0.00	-0.20 [-0.32]	56	0.00	-0.38 [-0.61]
28	-0.51	-0.22 [-0.35]	58	-0.51	-0.40 [-0.64]

Lateral Crash Pulse - Satellite Sensors (Second Record)

Time (msec)	RCM recorded driver side B pillar satellite acceleration (g)	RCM recorded passenger side B pillar satellite acceleration (g)	RCM recorded driver side C pillar satellite acceleration (g)	RCM recorded passenger side C pillar satellite acceleration (g)
0	-58.24	0.00	0.00	0.00
2	56.16	0.00	0.00	0.00
4	-54.08	0.00	0.00	0.00
6	83.20	0.00	0.00	0.00
8	-76.96	0.00	0.00	0.00
10	45.76	0.00	0.00	0.00
12	-39.52	0.00	0.00	0.00
14	20.80	0.00	0.00	0.00
16	-18.72	0.00	0.00	0.00
18	29.12	0.00	0.00	0.00
20	-4.16	2.08	0.00	0.00
22	12.48	2.08	0.00	0.00
24	-20.80	0.00	0.00	0.00
26	-8.32	0.00	0.00	0.00
28	-4.16	0.00	0.00	0.00
30	14.56	0.00	0.00	0.00
32	-2.08	2.08	0.00	0.00
34	-33.28	4.16	0.00	0.00
36	18.72	4.16	0.00	0.00
38	-12.48	2.08	0.00	0.00
40	18.72	0.00	0.00	0.00
42	14.56	0.00	0.00	0.00
44	14.56	0.00	0.00	0.00
46	-8.32	2.08	0.00	0.00
48	-4.16	2.08	0.00	0.00
50	-10.40	2.08	0.00	0.00
52	24.96	0.00	0.00	0.00
54	-6.24	0.00	0.00	0.00
56	-12.48	0.00	0.00	0.00
58	14.56	0.00	0.00	0.00

Deployment Data (Third Record)

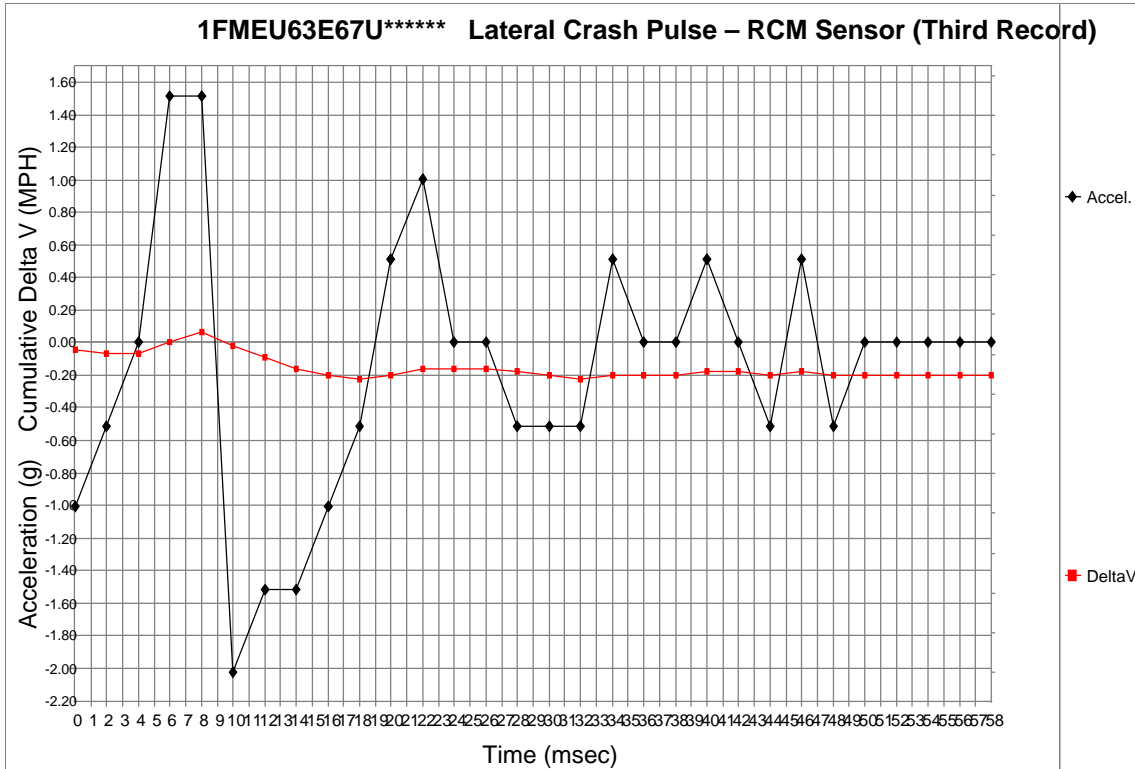
Contains No Recorded Data

System Status at Event (Third Record)

Life time operating timer at start of event (sec)	6,820,345
Key on timer at start of event (sec)	3,490
Driver belt switch circuit status at start of event	Buckled
Driver seat position at start of event	Not Forward
Passenger belt switch circuit status at start of event	Unbuckled
Last passenger OCS classification at start of event	Empty
Battery less than 10 volts at start of event	No
Battery greater than 16 volts at start of event	No
Warning lamp command at start of event	Off
CAN OCS message missing at start of event	No
Driver B-pillar satellite sensor faulted at start of event	No
Driver C-pillar satellite sensor faulted at start of event	No
Passenger B-pillar satellite sensor faulted at start of event	No
Passenger C-pillar satellite sensor faulted at start of event	No
Driver front satellite sensor faulted at start of event	No
Passenger front satellite sensor faulted at start of event	No
PADI lamp faulted at start of event	No
Warning lamp faulted at start of event	No
Energy reserve faulted at start of event	No

Pre-Crash Data (Third Record)

Time (sec)	-5	-4	-3	-2	-1
Accelerator Pedal (%)	0	0	0	0	0
Vehicle speed (MPH [km/h])	45.9 [73.8]	44.8 [72.2]	35.1 [56.4]	27.0 [43.5]	22.5 [36.3]
ABS event in progress	Yes	Yes	Yes	Yes	Yes
TCS engine event in progress	No	Yes	No	No	No
TCS brake event in progress	No	No	No	No	No
Brake depressed	Yes	Yes	Yes	No	No
IVD Event in Progress	Yes	Yes	No	No	No
OCS classification	Empty	Empty	Empty	Empty	Empty



Lateral Crash Pulse - RCM Sensor (Third Record)

Time (msec)	RCM recorded vehicle lateral acceleration (g)	Cumulative vehicle lateral velocity change (MPH [km/h])
0	-1.01	-0.04 [-0.06]
2	-0.51	-0.07 [-0.11]
4	0.00	-0.07 [-0.11]
6	1.52	0.00 [0.00]
8	1.52	0.07 [0.11]
10	-2.03	-0.02 [-0.03]
12	-1.52	-0.09 [-0.14]
14	-1.52	-0.16 [-0.26]
16	-1.01	-0.20 [-0.32]
18	-0.51	-0.22 [-0.35]
20	0.51	-0.20 [-0.32]
22	1.01	-0.16 [-0.26]
24	0.00	-0.16 [-0.26]
26	0.00	-0.16 [-0.26]
28	-0.51	-0.18 [-0.29]

Time (msec)	RCM recorded vehicle lateral acceleration (g)	Cumulative vehicle lateral velocity change (MPH [km/h])
30	-0.51	-0.20 [-0.32]
32	-0.51	-0.22 [-0.35]
34	0.51	-0.20 [-0.32]
36	0.00	-0.20 [-0.32]
38	0.00	-0.20 [-0.32]
40	0.51	-0.18 [-0.29]
42	0.00	-0.18 [-0.29]
44	-0.51	-0.20 [-0.32]
46	0.51	-0.18 [-0.29]
48	-0.51	-0.20 [-0.32]
50	0.00	-0.20 [-0.32]
52	0.00	-0.20 [-0.32]
54	0.00	-0.20 [-0.32]
56	0.00	-0.20 [-0.32]
58	0.00	-0.20 [-0.32]

Lateral Crash Pulse - Satellite Sensors (First Record)

Time (msec)	RCM recorded driver side B pillar satellite acceleration (g)	RCM recorded passenger side B pillar satellite acceleration (g)	RCM recorded driver side C pillar satellite acceleration (g)	RCM recorded passenger side C pillar satellite acceleration (g)
0	-6.24	0.00	0.00	0.00
2	-22.88	0.00	0.00	0.00
4	58.24	0.00	0.00	0.00
6	-35.36	2.08	0.00	0.00
8	45.76	2.08	0.00	0.00
10	-81.12	0.00	0.00	0.00
12	18.72	2.08	0.00	0.00
14	-14.56	2.08	0.00	0.00
16	37.44	0.00	0.00	0.00
18	6.24	0.00	0.00	0.00
20	-14.56	0.00	0.00	0.00
22	-56.16	0.00	0.00	0.00
24	43.68	2.08	0.00	0.00
26	-12.48	4.16	0.00	0.00
28	20.80	2.08	0.00	0.00
30	-18.72	2.08	0.00	0.00
32	8.32	0.00	0.00	0.00
34	-29.12	0.00	0.00	0.00
36	27.04	0.00	0.00	0.00
38	-12.48	0.00	0.00	0.00
40	27.04	0.00	0.00	0.00
42	18.72	0.00	0.00	0.00
44	4.16	2.08	0.00	0.00
46	-16.64	2.08	0.00	0.00
48	0.00	0.00	0.00	0.00
50	-4.16	0.00	0.00	0.00
52	-20.80	0.00	0.00	0.00
54	-6.24	0.00	0.00	0.00
56	-4.16	2.08	0.00	0.00
58	6.24	4.16	0.00	0.00

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	1FMEU63E67U*****
User	
Case Number	
EDR Data Imaging Date	
Crash Date	
Filename	10004 PCM WO VIN.CDR
Saved on	Friday, February 12 2010 at 09:14:38 AM
Collected with CDR version	Crash Data Retrieval Tool 3.3
Reported with CDR version	Crash Data Retrieval Tool 3.5.1
EDR Device Type	powertrain control module
Restraint Deployment Signal Received	No. Analyst evaluation of PCM EDR data is needed. Refer to CSV export of PCM EDR data to perform further analysis.

Comments

No comments entered.

Data Limitations

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 Friday, February 12 2010 at 09:14:38 AM .

FORD POWERTRAIN CONTROL MODULE EVENT DATA INTERPRETATION GUIDE

1. This document is intended to assist you in reading the data that has been retrieved from a Powertrain Control Module ("PCM") contained in a Ford vehicle. This document is further intended to provide general guidelines and is not intended to provide information regarding the interpretation of a specific read-out.
2. The data points in the "PCM EDR Data" tables shown in this report occur every 0.2 seconds of time. It should be pointed out that "Relative Time (calc.)" in these tables is calculated based on the 0.2 second time interval and is displayed relative to the receipt of a Restraint Deployment Signal from the RCM. The "Relative Time (calc.)" information is not data which is retrieved from the PCM but is calculated based on the above information.
3. In the event that one of the vehicle's restraint devices (e.g., the vehicle's airbag or pretensioner) have deployed as a result of a collision, the Restraint Control Module or RCM will send a Restraints Deployment Signal (RDS) to the PCM via the vehicle data bus or through a direct wired connection. If the PCM receives an RDS, it will lock the data. It should be pointed out that the RCM and Vehicle Data Bus both require power for tenths of a second after the collision in order to send a signal or flag to the PCM.
4. If no RDS flag has been received from the RCM and there is still power to the PCM, the PCM data will not lock and the circular buffer will continuously overwrite itself when the vehicle's ignition is in the run position. In this event, data contained in the PCM that was relevant to the collision may be lost. However, if power was lost as a result of the collision, or the ignition key was turned off shortly after the event, there may still be data relating to the collision in the PCM.
5. Finding the data relating to the moment of impact:

- a.) With regard to the PCM EDR Data tables where a Restraint Deployment Signal is received, the data is displayed in order of the "Relative Time (calc.)" parameter beginning with the oldest recorded frame of data.

The moment of impact can be found by reviewing the data contained in the RDS column. Specifically, the data samples recorded with an RDS flag equal to "Received" in the PCM EDR Data tables signify points recorded after the PCM received the RDS signal from the RCM. If the PCM has received an RDS flag, the moment of impact is typically set at the RDS = "Not Received" in the PCM EDR Data tables reading that immediately precedes a reading of RDS = "Received". The last RDS = "Received" data point signifies the last data point recorded in the event.

- b.) With regard to the PCM EDR Data tables where a Restraint Deployment Signal is not received, the data is displayed in order of the "Buffer Address" parameter data beginning with the lowest address value. The PCM buffer is circular and the data point of first address listed in the PCM EDR Data tables does not necessarily signify the beginning of the PCM recording. The start and stop time of the PCM recording could be in the middle of the Table.

The moment of impact usually correlates with a discontinuity of the data listed in the table. If a single, significant discontinuity in the data is found, the data point immediately preceding the discontinuity is likely to be the last data point recorded. This point usually signifies impact time zero. If there is no single significant discontinuity, the data must be examined in detail to determine the largest discontinuity in the

largest number of data elements. If no single largest discontinuity can be determined, it may not be possible to determine the moment of impact.

6. The PCM Data Tables further show a column labeled as the "Key on Timer - 63.75 Max (sec)" or PUTMR. The PUTMR shows the length of time that the PCM was functioning for the most recent key cycle. The timer ascends to a maximum value of 63.75 seconds. If the data was not locked by an RDS flag and the ignition key was turned off and on again, the PCM will begin to write new data starting at the beginning of the data table. While it is not common, there are instances where the first portion of the data table has subsequent-key-on, post-crash data; while the latter portion of the data table has data from the key cycle in which the crash occurred. In other rare cases, an event has occurred in less than 25 seconds after key on and older data from prior key cycles has been left in the latter part of the buffer. Review the Key on Timer - 63.75 Max (sec) (PUTMR) data for discontinuities to determine if this has occurred.

7. Data displayed in the Key on Timer - 63.75 Max (sec) column has a resolution of 0.25 seconds and rounds actual data to the nearest 0.25 seconds. The data points occur every 0.2 seconds.

Actual time	Key on Timer display
0.0	0.0
0.2	0.25
0.4	0.50
0.6	0.50
0.8	0.75
1.0	1.00

8. Recorded Vehicle Speed is proportional to transmission output shaft speed and accuracy can be affected if the vehicle has had the tire size or inflation pressure or the final drive axle ratio changed from the factory build specifications.

PCM Data Source:

• All PCM recorded data is fed directly from sensors to the PCM where raw signals are processed, and stored internally, except for the following parameters which are transmitted via the vehicle's communication network:

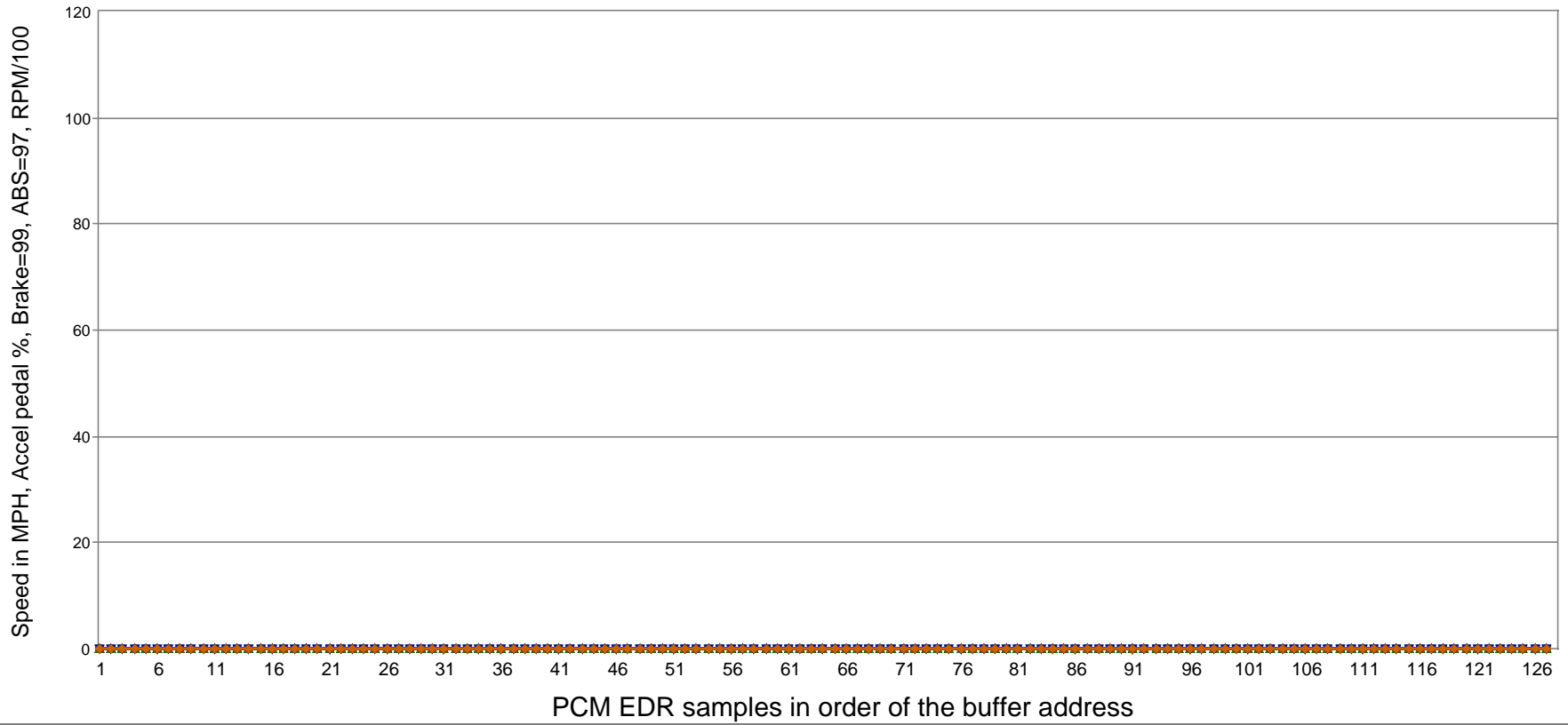
- Stability Control
- Traction Control
- ABS
- Restraint Deployment Signal

02005_PCM-1-2_r001

PCM Module Information

Vehicle Identification Number (from PCM)	1FMEU63E67U*****
PCM File Name (calibration level)	PWDJ3B8.HEX*
PCM Part Number	6L2A-12A650-CBA

1FMEU63E67U*** PCM EDR Crash Data - RDS Not Received**



▲ Vehicle Speed (MPH) ■ Accelerator Pedal (%) ● Brake Switch (0=Off/99=On) ▼ ABS (0=Inactive/97=Active) ◆ RPM/100

PCM EDR Data (1)

Buffer Address (Hex)	Relative Time (calc.) (Seconds)	Restraint Deployment Signal (Received / Not Received)	Speed, Vehicle Indicated (MPH [km/h])	Accelerator Pedal % Full (%)	Engine Throttle % Full (%)	Brake Switch (On / Off)	Brake SC De-ac (On / Off)	ABS (Active / Inactive)	Transmission - Neutral (Neutral / Not Neutral)
EA000010	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000020	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000030	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000040	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000050	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000060	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000070	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000080	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000090	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0000A0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0000B0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0000C0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0000D0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0000E0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0000F0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000100	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000110	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000120	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000130	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000140	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000150	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000160	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000170	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000180	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000190	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0001A0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0001B0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0001C0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0001D0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0001E0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0001F0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000200	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000210	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000220	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000230	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000240	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000250	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000260	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000270	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000280	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000290	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0002A0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0002B0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0002C0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0002D0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0002E0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0002F0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000300	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000310	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000320	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000330	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000340	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000350	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000360	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000370	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000380	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000390	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0003A0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0003B0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0003C0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0003D0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0003E0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0003F0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral

Buffer Address (Hex)	Relative Time (calc.) (Seconds)	Restraint Deployment Signal (Received / Not Received)	Speed, Vehicle Indicated (MPH [km/h])	Accelerator Pedal % Full (%)	Engine Throttle % Full (%)	Brake Switch (On / Off)	Brake SC De-ac (On / Off)	ABS (Active / Inactive)	Transmission - Neutral (Neutral / Not Neutral)
EA000400	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000410	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000420	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000430	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000440	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000450	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000460	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000470	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000480	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000490	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0004A0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0004B0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0004C0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0004D0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0004E0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0004F0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000500	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000510	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000520	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000530	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000540	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000550	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000560	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000570	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Neutral
EA000580	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Neutral
EA000590	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Neutral
EA0005A0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Neutral
EA0005B0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Neutral
EA0005C0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Neutral
EA0005D0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Neutral
EA0005E0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Neutral
EA0005F0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000600	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000610	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000620	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000630	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000640	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000650	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000660	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000670	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000680	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000690	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0006A0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0006B0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0006C0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0006D0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0006E0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0006F0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000700	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000710	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000720	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000730	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000740	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000750	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000760	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000770	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000780	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA000790	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0007A0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0007B0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0007C0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0007D0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0007E0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral
EA0007F0	N/A	Not Received	0 [0]	0	8.5	OFF	OFF	Not Active	Not Neutral

PCM EDR Data (2)

Buffer Address (Hex)	Relative Time (calc.) (Seconds)	Transmission - Reverse (Reverse / Not Reverse)	Speed Control (On / Off)	Engine RPM (RPM)	Driveline Torque Commanded (N-m)	Driveline Torque Actual (N-m)	Traction Control (Active / Inactive)	Stability Control (Active / Inactive)	Key On Timer 63.75 Max (sec) (Seconds)
EA000010	N/A	Not Reverse	OFF	0	140	838	Not Active	Not Active	63.75
EA000020	N/A	Not Reverse	OFF	0	140	838	Not Active	Not Active	63.75
EA000030	N/A	Not Reverse	OFF	0	140	839	Not Active	Not Active	63.75
EA000040	N/A	Not Reverse	OFF	0	140	839	Not Active	Not Active	63.75
EA000050	N/A	Not Reverse	OFF	0	140	839	Not Active	Not Active	63.75
EA000060	N/A	Not Reverse	OFF	0	140	839	Not Active	Not Active	63.75
EA000070	N/A	Not Reverse	OFF	0	140	839	Not Active	Not Active	63.75
EA000080	N/A	Not Reverse	OFF	0	140	840	Not Active	Not Active	63.75
EA000090	N/A	Not Reverse	OFF	0	140	840	Not Active	Not Active	63.75
EA0000A0	N/A	Not Reverse	OFF	0	140	840	Not Active	Not Active	63.75
EA0000B0	N/A	Not Reverse	OFF	0	140	840	Not Active	Not Active	63.75
EA0000C0	N/A	Not Reverse	OFF	0	140	840	Not Active	Not Active	63.75
EA0000D0	N/A	Not Reverse	OFF	0	141	840	Not Active	Not Active	63.75
EA0000E0	N/A	Not Reverse	OFF	0	141	840	Not Active	Not Active	63.75
EA0000F0	N/A	Not Reverse	OFF	0	141	841	Not Active	Not Active	63.75
EA000100	N/A	Not Reverse	OFF	0	141	841	Not Active	Not Active	63.75
EA000110	N/A	Not Reverse	OFF	0	141	841	Not Active	Not Active	63.75
EA000120	N/A	Not Reverse	OFF	0	141	841	Not Active	Not Active	63.75
EA000130	N/A	Not Reverse	OFF	0	141	841	Not Active	Not Active	63.75
EA000140	N/A	Not Reverse	OFF	0	141	842	Not Active	Not Active	63.75
EA000150	N/A	Not Reverse	OFF	0	141	842	Not Active	Not Active	63.75
EA000160	N/A	Not Reverse	OFF	0	141	842	Not Active	Not Active	63.75
EA000170	N/A	Not Reverse	OFF	0	141	842	Not Active	Not Active	63.75
EA000180	N/A	Not Reverse	OFF	0	141	842	Not Active	Not Active	63.75
EA000190	N/A	Not Reverse	OFF	0	141	842	Not Active	Not Active	63.75
EA0001A0	N/A	Not Reverse	OFF	0	141	842	Not Active	Not Active	63.75
EA0001B0	N/A	Not Reverse	OFF	0	141	842	Not Active	Not Active	63.75
EA0001C0	N/A	Not Reverse	OFF	0	141	842	Not Active	Not Active	63.75
EA0001D0	N/A	Not Reverse	OFF	0	141	842	Not Active	Not Active	63.75
EA0001E0	N/A	Not Reverse	OFF	0	141	842	Not Active	Not Active	63.75
EA0001F0	N/A	Not Reverse	OFF	0	141	842	Not Active	Not Active	63.75
EA000200	N/A	Not Reverse	OFF	0	141	842	Not Active	Not Active	63.75
EA000210	N/A	Not Reverse	OFF	0	141	843	Not Active	Not Active	63.75
EA000220	N/A	Not Reverse	OFF	0	141	843	Not Active	Not Active	63.75
EA000230	N/A	Not Reverse	OFF	0	141	843	Not Active	Not Active	63.75
EA000240	N/A	Not Reverse	OFF	0	141	843	Not Active	Not Active	63.75
EA000250	N/A	Not Reverse	OFF	0	141	843	Not Active	Not Active	63.75
EA000260	N/A	Not Reverse	OFF	0	141	843	Not Active	Not Active	63.75
EA000270	N/A	Not Reverse	OFF	0	141	843	Not Active	Not Active	63.75
EA000280	N/A	Not Reverse	OFF	0	141	843	Not Active	Not Active	63.75
EA000290	N/A	Not Reverse	OFF	0	141	843	Not Active	Not Active	63.75
EA0002A0	N/A	Not Reverse	OFF	0	141	843	Not Active	Not Active	63.75
EA0002B0	N/A	Not Reverse	OFF	0	141	843	Not Active	Not Active	63.75
EA0002C0	N/A	Not Reverse	OFF	0	141	843	Not Active	Not Active	63.75
EA0002D0	N/A	Not Reverse	OFF	0	141	843	Not Active	Not Active	63.75
EA0002E0	N/A	Not Reverse	OFF	0	141	843	Not Active	Not Active	63.75
EA0002F0	N/A	Not Reverse	OFF	0	141	843	Not Active	Not Active	63.75
EA000300	N/A	Not Reverse	OFF	0	141	843	Not Active	Not Active	63.75
EA000310	N/A	Not Reverse	OFF	0	141	843	Not Active	Not Active	63.75
EA000320	N/A	Not Reverse	OFF	0	141	843	Not Active	Not Active	63.75
EA000330	N/A	Not Reverse	OFF	0	141	843	Not Active	Not Active	63.75
EA000340	N/A	Not Reverse	OFF	0	141	843	Not Active	Not Active	63.75
EA000350	N/A	Not Reverse	OFF	0	141	844	Not Active	Not Active	63.75
EA000360	N/A	Not Reverse	OFF	0	141	844	Not Active	Not Active	63.75
EA000370	N/A	Not Reverse	OFF	0	141	844	Not Active	Not Active	63.75
EA000380	N/A	Not Reverse	OFF	0	141	844	Not Active	Not Active	63.75
EA000390	N/A	Not Reverse	OFF	0	141	844	Not Active	Not Active	63.75
EA0003A0	N/A	Not Reverse	OFF	0	141	844	Not Active	Not Active	63.75
EA0003B0	N/A	Not Reverse	OFF	0	141	844	Not Active	Not Active	63.75
EA0003C0	N/A	Not Reverse	OFF	0	141	844	Not Active	Not Active	63.75
EA0003D0	N/A	Not Reverse	OFF	0	141	844	Not Active	Not Active	63.75
EA0003E0	N/A	Not Reverse	OFF	0	141	844	Not Active	Not Active	63.75
EA0003F0	N/A	Not Reverse	OFF	0	141	844	Not Active	Not Active	63.75

Buffer Address (Hex)	Relative Time (calc.) (Seconds)	Transmission - Reverse (Reverse / Not Reverse)	Speed Control (On / Off)	Engine RPM (RPM)	Driveline Torque Commanded (N-m)	Driveline Torque Actual (N-m)	Traction Control (Active / Inactive)	Stability Control (Active / Inactive)	Key On Timer 63.75 Max (sec) (Seconds)
EA000400	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA000410	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA000420	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA000430	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA000440	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA000450	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA000460	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA000470	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA000480	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA000490	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA0004A0	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA0004B0	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA0004C0	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA0004D0	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA0004E0	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA0004F0	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA000500	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA000510	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA000520	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA000530	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA000540	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA000550	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA000560	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA000570	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA000580	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA000590	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA0005A0	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA0005B0	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA0005C0	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA0005D0	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA0005E0	N/A	Not Reverse	OFF	0	141	845	Not Active	Not Active	63.75
EA0005F0	N/A	Not Reverse	OFF	0	139	830	Not Active	Not Active	63.75
EA000600	N/A	Not Reverse	OFF	0	139	830	Not Active	Not Active	63.75
EA000610	N/A	Not Reverse	OFF	0	139	830	Not Active	Not Active	63.75
EA000620	N/A	Not Reverse	OFF	0	139	831	Not Active	Not Active	63.75
EA000630	N/A	Not Reverse	OFF	0	139	831	Not Active	Not Active	63.75
EA000640	N/A	Not Reverse	OFF	0	139	831	Not Active	Not Active	63.75
EA000650	N/A	Not Reverse	OFF	0	139	831	Not Active	Not Active	63.75
EA000660	N/A	Not Reverse	OFF	0	139	831	Not Active	Not Active	63.75
EA000670	N/A	Not Reverse	OFF	0	139	831	Not Active	Not Active	63.75
EA000680	N/A	Not Reverse	OFF	0	139	831	Not Active	Not Active	63.75
EA000690	N/A	Not Reverse	OFF	0	139	832	Not Active	Not Active	63.75
EA0006A0	N/A	Not Reverse	OFF	0	139	832	Not Active	Not Active	63.75
EA0006B0	N/A	Not Reverse	OFF	0	139	832	Not Active	Not Active	63.75
EA0006C0	N/A	Not Reverse	OFF	0	139	832	Not Active	Not Active	63.75
EA0006D0	N/A	Not Reverse	OFF	0	139	832	Not Active	Not Active	63.75
EA0006E0	N/A	Not Reverse	OFF	0	139	833	Not Active	Not Active	63.75
EA0006F0	N/A	Not Reverse	OFF	0	139	833	Not Active	Not Active	63.75
EA000700	N/A	Not Reverse	OFF	0	139	833	Not Active	Not Active	63.75
EA000710	N/A	Not Reverse	OFF	0	139	833	Not Active	Not Active	63.75
EA000720	N/A	Not Reverse	OFF	0	139	834	Not Active	Not Active	63.75
EA000730	N/A	Not Reverse	OFF	0	139	834	Not Active	Not Active	63.75
EA000740	N/A	Not Reverse	OFF	0	140	834	Not Active	Not Active	63.75
EA000750	N/A	Not Reverse	OFF	0	140	835	Not Active	Not Active	63.75
EA000760	N/A	Not Reverse	OFF	0	140	835	Not Active	Not Active	63.75
EA000770	N/A	Not Reverse	OFF	0	140	835	Not Active	Not Active	63.75
EA000780	N/A	Not Reverse	OFF	0	140	836	Not Active	Not Active	63.75
EA000790	N/A	Not Reverse	OFF	0	140	836	Not Active	Not Active	63.75
EA0007A0	N/A	Not Reverse	OFF	0	140	836	Not Active	Not Active	63.75
EA0007B0	N/A	Not Reverse	OFF	0	140	837	Not Active	Not Active	63.75
EA0007C0	N/A	Not Reverse	OFF	0	140	837	Not Active	Not Active	63.75
EA0007D0	N/A	Not Reverse	OFF	0	140	837	Not Active	Not Active	63.75
EA0007E0	N/A	Not Reverse	OFF	0	140	838	Not Active	Not Active	63.75
EA0007F0	N/A	Not Reverse	OFF	0	140	838	Not Active	Not Active	63.75