

## CDR File Information

User Entered VIN	3A4FY48B67T*****
User	RL Wangler 2154
Case Number	08039113
EDR Data Imaging Date	Monday, April 14 2008
Crash Date	Sunday, April 6 2008
Filename	DURANGO-.CDR
Saved on	Tuesday, April 15 2008 at 07:27:00 PM
Collected with CDR version	Crash Data Retrieval Tool 3.00
Reported with CDR version	Crash Data Retrieval Tool 3.2
EDR Device Type	airbag control module
Event(s) recovered	Not retrievable by CDR tool

**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.

## Data Limitations

**AIRBAG CONTROL MODULE (ACM) DATA LIMITATIONS:**

**GENERAL INFORMATION:**

**CAUTION:** During Bench top imaging, make sure the ACM is not moved, tilted or turned over while connected to and powered by the CDR Interface Module. Also, after a CDR imaging process, wait 2 minutes after power is removed from the ACM before attempting to move the module. Not following these general ACM guidelines for bench top imaging could cause new events to be recorded in the ACM.

The ACM current fault status will be altered if the ACM is powered up without having all of the other vehicle inputs connected (except bench top imaging). This situation will occur when the CDR tool is connected directly to the ACM. This will not affect any of the stored fault data information. Always make a note in the CDR case comments page when ACM bench top imaging process is performed.

The recorded Deployment Event will contain Pre-Crash data.

- T0 (where '0' is subscript) (-.01 sec.) is defined as the last sample point in the vehicle data buffer when the ACM commanded a deployment for all vehicles except the 2008 - 2009 Dodge Grand Caravan, 2008-2009 Chrysler Town and Country and 2009 Dodge Journey. In these vehicles, T0 (where '0' is subscript) is defined as the algorithm wakeup. Please note that the algorithm wakeup may be different for front, side, and rollover events and their associated parameters.
- The VIN is captured by the ACM and then recorded as the Original IM after 10 consecutive ignition cycles of capturing the same number. Once it has been recorded, this number can not be modified.

**CDR FILE INFORMATION:**

Event(s) Recovered definitions:

- None - There are no stored events in the Airbag Control Module (ACM)
- Not Retrievable - Event Data is stored in the ACM but is not retrievable by the CDR tool.
- Most Recent Event - Data of the most recent event is displayed in the report
- 1st Prior Event - Two events are stored in the ACM, Data displayed is of the first prior event.
- 2nd Prior Event - Three events are stored in the ACM, Data displayed is of the second prior event.
- Etc., (for modules with 3 to 5 stored events)

**CDR RECORD INFORMATION:**

- If power to the ACM is lost during a deployment event, all or part of the event data record may not be recorded. "Interrupted" will be displayed for Vehicle Event Recorder Status.
- The Airbag Control Module Configuration indicates the inputs and outputs that the ACM for a particular vehicle monitors and/or controls.
- Vehicle Data (PreCrash) is transmitted to the Airbag Control Module, by various vehicle control modules, via the vehicle's communication network. (For example: Vehicle Speed, Engine RPM, Percent throttle and brake switch status are transmitted by the PCM. ESP data is from the electronic brake module.)
- On 2006-2009 Dodge Ram 2500/3500, the Engine RPM recorded is limited to a maximum of 080 RPM.
- On the 2008 - 2009 Dodge Grand Caravan, 2008-2009 Chrysler Town and Country and 2009 Dodge Journey, the engine RPM resolution is 256 rpm.

- On all other vehicles, the resolution is 2 rpm.
- If a recorded event has RPM equal to 160 or 4080 and vehicle speed equals 58 for each time stamp, then the data is default data and the event stored in the ACM is not valid.
- The accuracy of the recorded Vehicle Speed will be affected if the vehicle had the tire size or the final drive axle ratio changed from the factory build specifications.
- Vehicle Speed is reported as an average of the drive wheels.
- On the 2008 - 2009 Dodge Grand Caravan, 2008-2009 Chrysler Town and Country and 2009 Dodge Journey, the vehicle speed resolution is 2 mph. On all other vehicles, the resolution is 4 mph.
- The MIL (Malfunction Indicator Lamp) Status for the various recorded systems indicates the state of the applicable malfunction indicator lamp at the time that the data was captured. Note: Some fault codes could be stored due to component/system damage from the accident

NOTE: A StarScan Tool should be used to read any stored Diagnostic Trouble Codes (DTC's) in the various electronic modules (ACM, PCM, ABS, TCM, etc., where applicable) for use in interpretation of some vehicle specific recorded data.

#### VEHICLE DATA DEFINITIONS:

- N/A - Not Applicable is used to show default values. This indicates that no data exists or that the data parameter is not applicable for vehicle configuration.
- SNA - Signal Not Available indicates that a defective sensor or system fault condition exists that is not allowing the data parameter to be sent across the vehicle communication bus.
- Not Retrievable- This indicates that the CDR tool was not able to retrieve that data for that particular vehicle data parameter.

#### Vehicle Event Recorder Status definitions:

- Interrupted: Contains Event, but was interrupted during recording;  
Indicates data from the captured event was not fully recorded
- Complete: Contains Complete Data from an Event;  
Indicates data from the captured event has been fully recorded
- No data: Contains No Event Data
- Relative Throttle (%) - This is the percentage of throttle blade opening (0 - 100%)
- Relative Pedal (%) - This is the percentage of accelerator pedal depressed (0 - 100%)
- Brake Switch #1 Status - This is the brake switch status of Service Brake (Open/Closed) Open = Brake not depressed; Closed = Brake depressed
- Brake Switch #2 Status - This is the brake switch status for Cruise Control (Open/Closed) Open = Brake not depressed; Closed = Brake depressed
- ABS MIL status - This indicates the ABS fault indicator lamp status. It will only be illuminated when there is a fault in the ABS system. The Electronic brake module DTC's should be read and recorded for final system interpretation.
- ESP MIL status - This indicates the ESP/BAS fault indicator lamp status. It will only be illuminated when there is a fault or thermal model shutdown in the ESP system. The ESP module DTC's should be read and recorded for final system interpretation. This is only valid for vehicles equipped with ESP.
- ESP Lamp Steady State Requested- This is the status of the ESP symbol- "car with squiggly lines" indicator lamp. "Yes" indicates ESP has been turned off by the driver or has reduced performance and is not an indication of a fault in the system. This is only valid for vehicles equipped with ESP.
- ESP Lamp Flashing Requested - If "Yes", then an ESP, Traction Control or Trailer Sway Control (if equipped) event was active at the time of data capture. This is only valid for vehicles equipped with ESP
- ESP Disabled - "Yes" indicates that ABS & ESP have been disabled by the driver due to system performance. This is only valid for vehicles equipped with ESP.
- Traction Control On/Off Button Status - Enabled means the system is functional and not turned off by the driver. On equipped vehicles.
- ESP Active - "YES" indicates that the ESP system is intervening with wheel specific braking/engine control. This is only valid for vehicles equipped with ESP.
- Panic Brake Assist Active- "Yes" indicates that all four of the brake circuits are under ABS control. This is only valid for vehicles equipped with ESP.
- Steering Angle (Degrees) if equipped: Valid range is -2048 degrees to +2047 degrees;
  - Steering Angle polarity is positive for right turns on:
    - § 2005 - 2007 Grand Cherokee
    - § 2006 - 2007 Commander
    - § 2005 - 2009 300, Magnum, and Charger
    - § 2008 - 2009 Challenger

- Steering Angle polarity is negative for right turns on:
  - § 2008 - 2009 Grand Cherokee and Commander
  - § All other vehicles not specified
- Yaw Rate (Degrees) if equipped: Valid range is 327.68 degrees/second to -327.67 degrees/second. All vehicles use negative yaw rate when making a right turn.
- Wheel Speed (stored for some vehicles equipped with ABS/ESP); values revolutions per minute:
  - LF = Left Front Tire
  - RF = Right Front Tire
  - LR = Left Rear Tire
  - RR = Right Rear Tire
- ETC Lamp Status - Lamp "ON" indicates there is an active Electronic Throttle Control. This is only valid for vehicles equipped with ETC.
- ETC Lamp Flashing - If "Yes", then the ETC is in the limp in mode. This is only valid for vehicles equipped with ETC.
- Engine Torque Applied - If "No", then no engine torque output was applied (as in Park/Neutral for Automatic transmissions or clutch depressed on manual or during an ESP/Traction Control event), "Yes", then engine torque output was applied.
- Tire 1 (2,3) Location - This indicates the location of the tire pressure sensor data. Default is used to indicate that the location of the tire pressure sensor is unknown or there is no tire pressure sensor in the wheel. Vehicles with Base Tire Pressure Monitoring systems will display SPARE for all 3 Tire Locations as these vehicles do not send actual pressure values across the communication bus.
- Tire 1 (2,3) Pressure Status - This indicates the actual pressure status of the Tire Location defined in the previous column. Possible values are LOW, NORMAL, HIGH, or SNA for this parameter. Vehicles with Base Tire Pressure Monitoring systems will display NORMAL even though these vehicles do not send actual pressure values across the communication bus.
- Tire 1 (2,3) Pressure (psi) - This indicates the actual tire pressure value of the Tire Location defined. Vehicles with Base Tire Pressure Monitoring systems will display N/A for this parameter as these vehicles do not send actual pressure values across the communication bus. Note: Not all vehicle TPM systems have a tire pressure sensor located in the spare tire.
- Cruise Control System Status - "Yes" indicates that the Cruise Control system is turned on.
- Cruise Control System Active - "Yes" indicates the Cruise Control system is actively controlling vehicle speed. "No" indicates the system is NOT controlling vehicle speed.

#### GENERAL DEFINITIONS:

- Capture - The process of buffering data into a temporary, volatile storage medium where it is continuously updated at regular time intervals.
- Ignition Cycle - Ignition power applied to and removed from the ACM.
- Matured - Diagnostic Trouble Code has met criteria to be stored in module.
- Powered-Up - The act of applying a 10V - 16V dc power source to the appropriate pins on a specific module.
- Record - The process of saving captured data into a nonvolatile device for subsequent retrieval.

#### ACRONYMS:

ABS	Anti-Lock Brake System
ACM	Air Bag Control Module
BAS	Brake Assist System
DTC	Diagnostic Trouble Code
EBD	Electronic Brake Distribution
ESP	Electronic Stability Program
ETC	Electronic Throttle Control
MIL	Malfunction Indicator Lamp
PCM	Power Train Control Module
PVS	Pedal Voltage Sensor
RPM	Revolution per Minute
Service Brake	Brake Pedal
TCM	Transmission Control Module
TPM	Tire Pressure Monitoring
TPS	Throttle Position Sensor
VIN	Vehicle Identification Number

#### APPLICATION INFORMATION:

- Only 2004 - 2009 Durangos equipped with side airbags have EDR data that can be imaged by the CDR tool. Durangos not equipped with side airbags have EDR Data that can be imaged by the supplier, but not by the CDR tool.

- For 2006 MY, some Chrysler300, Dodge Magnum, Dodge Charger, Jeep Grand Cherokee, and Jeep Commander models may contain EDR data that can not be imaged by the CDR tool.
- For 2007 MY, some PT Cruiser models may contain EDR data that can not be imaged by the CDR tool.
- EDR Data is only recorded for frontal deployments in the following vehicles:

2004-2007	Durango - with side airbags
2007	Aspen
2006-2007	Ram 1500
2006-2009	Ram 2500/3500 Heavy Duty
2007	Caliber, Compass, Patriot
2007	Sebring
2007	Nitro
2007	Wrangler

## Airbag Control Module Identification

Airbag Control Module Part Number	04714682AE
Airbag Control Module Serial Number	T52MD005765083
Airbag Control Module Supplier	Robert Bosch Corporation

## Airbag Control Module Configuration

Configured for Front Driver Seatbelt Switch	No
Configured for Front Center Seatbelt Switch	No
Configured for Front Passenger Seatbelt Switch	Yes
Configured for 2nd Row Left Seatbelt Switch	No
Configured for 2nd Row Center Seatbelt Switch	No
Configured for 2nd Row Right Seatbelt Switch	No
Configured for 3rd Row Left Seatbelt Switch	No
Configured for 3rd Row Center Seatbelt Switch	No
Configured for 3rd Row Right Seatbelt Switch	No
Configured for Driver Inflatable Knee Bolster	Yes
Configured for Left Curtain #1	No
Configured for Right Curtain #1	No
Configured for Left Curtain #2	No
Configured for Right Curtain #2	No
Configured for Front Driver Seatbelt Pretensioner	Yes
Configured for Front Center Seatbelt Pretensioner	No
Configured for Front Passenger Seatbelt Pretensioner	Yes
Configured for 2nd Row Left Seatbelt Pretensioner	No
Configured for 2nd Row Center Seatbelt Pretensioner	No
Configured for 2nd Row Right Seatbelt Pretensioner	No
Configured for 3rd Row Left Seatbelt Pretensioner	No
Configured for 3rd Row Center Seatbelt Pretensioner	No
Configured for 3rd Row Right Seatbelt Pretensioner	No
Configured for Left Side Sensor #1	No
Configured for Left Side Sensor #2	No
Configured for Left Side Sensor #3	No
Configured for Right Side Sensor #1	No
Configured for Right Side Sensor #2	No
Configured for Right Side Sensor #3	No
Configured for Left Up Front Sensor	Yes
Configured for Right Up Front Sensor	Yes
Configured for Front Driver Digressive Load Limiter	No
Configured for Front Passenger Digressive Load Limiter	No
Configured for Driver Seat Track Position Sensor	Yes
Configured for Passenger Seat Track Position Sensor	Yes
Configured for Passenger Airbag Disable Switch	No
Configured for Passenger Occupant Classification System	Yes

## System Status at Time of Retrieval

Original VIN	3A4FY48B67T58****
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## 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.

5A 87 02 03 01 54 FF 00 00 06 D4 A1 30 34 37 31 34 36 38 32 41 45

5A 88 33 41 34 46 59 34 38 42 36 37 54 35 38 2A 2A 2A 2A

2A 2A 00 00 00 00 00 34 38 42 36 37 54 35 38 2A 2A 2A 2A

2A 2A 54 35 32 4D 44 30 30 35 37 36 35 30 38 33

61 EA 04 82 02 C0 EC 00

73 E2 04 00 00 9B 54 FF FF 9B 56 FF FF 9B 54 FF FF 9B 56 FF FF 9B 54 FF FF 9B 56 FF FF  
9B 54 FF FF 9B 56 FF FF

7F 31 33 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

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## Comments

Download done at request of TCME in effort to fully investigate the death.  
Relative is aware of download.  
Desktop download.

Module powered for at least 2 minutes prior to imaging.

## 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.