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REJECTING THE REJECTION

Pennsylvania state and federal courts strictly construe UIM rejection forms

By: Daniel E. Cummins, Esq.[1]

In a manner that is presumably similar to the requirements of the automobile law in other jurisdictions, Pennsylvania's Motor Vehicle Responsibility Law [MVFRL] imposes a number of across-the-board requirements which automobile insurance carriers must follow during an insured's application and purchase of an automobile insurance policy. Among the many requirements are mandated forms, containing specified language, which insurance companies must present and have executed by the applicant during the purchasing of the policy.

For example, Pennsylvania law mandates that a UIM carrier is required to provide UM and UIM coverage in an amount at least equal to the liability limits selected by its insured unless a valid rejection form, written in accordance with the specific form language set forth in 75 Pa.C.S. § 1731(c), was executed by the insured. Under the separate 75 Pa.C.S. § 1731(c.1), the Pennsylvania Legislature also provided that "[a]ny rejection form that does not specifically comply with this section is void."

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Litigation over the propriety of these forms typically arises later after the injured party insured has been in a motor vehicle accident and wishes to challenge whether he or she properly rejected or reduced the UM or UIM coverages under their own policy.

A number of recent state and federal court decisions in Pennsylvania have confirmed that the courts of this Commonwealth will engage in a strict constructionist approach when reviewing challenges to these UM/UIM rejection forms. From these decisions, it is readily

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Uniting Plaintiff, Defense, Insurance, and Corporate Counsel to Advance the Civil Justice System

AUTOMOTIVE EVENT DATA RECORDERS: USHERING IN A NEW ERA OF ACCIDENT RECONSTRUCTION

By: Will Bortles and William Neale

Introduction

By the end of this year, the way we approach accident reconstruction may drastically change. The National Highway Traffic Safety Administration (NHTSA) estimated that by 2010, 85% of new vehicles would contain some type of Event Data Recorder (EDR)[1]. However, it has been unclear which vehicles contained an EDR, what data was being recorded and, more importantly, how an investigator could access and preserve this data.

When discussing automotive EDRs, parallels are often drawn to the flight data recorders, "black boxes," found in modern aircraft. Flight data recorders are specifically designed to aid investigators in the event of an incident. However, in the case of EDRs found in automobiles, the capability of recording data is often a secondary or even tertiary function of an existing electronic control module (ECM) that is already installed in the vehicle. These devices were designed by automakers to monitor the performance of various component systems, not to assist in the investigation of an incident.

As of September 2012, this will no longer be the case. The NHTSA ruled in the Code of Federal Regulations (49 C.F.R. 563) that passenger vehicles manufactured after September 1, 2012 that are equipped with data recording capabilities would adopt uniform requirements for the accuracy, collection, storage and survivability of recorded data as well as provide a commercially available data retrieval tool to access this data. The goal of this ruling was to ensure that the data recorded by automotive EDRs was readily usable for Automatic Crash Notification systems (e.g. OnStar®), effective crash investigations and the analysis of safety equipment performance[1]. While this ruling does not necessarily mandate the installation of EDRs in all vehicles, it requires that all vehicles in which the automaker has voluntarily installed an EDR to adhere to the standard.

History

In their most primitive form, automotive EDRs date back to the 1970's[2]. General Motors installed complex devices in some Indy race cars in 1992 to research injury thresholds of the human body during a collision. However, modern EDRs became prevalent in 1994 when General Motors began to replace an electromechanical system used for crash detection with more sophisticated acceleration sensors and computers[3].

These first generation EDRs retained only a few data elements: seatbelt status, airbag warning lamp status and acceleration versus time. Beginning in 1999, the General Motors airbag control modules expanded to record pre-crash data, consisting of vehicle speed [mph], engine speed [rpm] as well as throttle and brake usage[4]. However, the ability to access and retrieve this data was not readily available to the public.

In 2000, the Vetronix Corporation (now Bosch) released the first commercially available tool, the Crash Data Retrieval (CDR) System, supporting select General Motors vehicles made between 1994 and 2000[5]. This allowed members of law enforcement as well as other accident reconstructionists to retrieve and analyze data retained by the modules. Since 2000, many more automakers are supported by the CDR system including Ford, Dodge/Chrysler and Toyota. Other automakers such as Honda and Mazda have consequently entered into agreements for coverage using the Bosch CDR tool to meet the NHTSA's requirement for data access by September 2012.

1. Department of Transportation, National Highway Traffic Safety Administration, "49 CFR Part 563", Docket No. NHTSA-2006-25666, 2006.
2. Gabler, H. Clay, et al., Event Data Recorders: A Decade of Innovation, Society of Automotive Engineers, SAE International, Warrendale, PA, 2002.
3. Chidester, Augustus "Chip," et al., "Recording Automotive Crash Event Data," International Symposium on Transportation Reorders, 1999.
4. Robert Bosch LLC, "Crash Data Retrieval System – Help File," CDR Software Version 4.3, 2012.
5. Haight, Rusty, "An Abbreviated History of CDR Technology," Collision Magazine, Volume 5, Issue 1, Spring 2010.

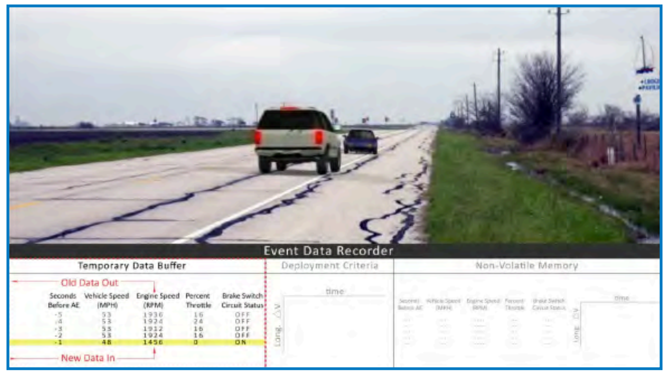
How They Work

In the accident reconstruction community, three electronic control modules dominate the EDR landscape in passenger vehicles: the Airbag Control Module (ACM), the Powertrain Control Module (PCM) and Roll-Over Sensor (ROS). EDRs found in airbag control modules are the most frequently encountered due to their ability to detect, discern and record crash data.

Consider the following scenario involving a late model SUV with an ACM that has EDR functionality:

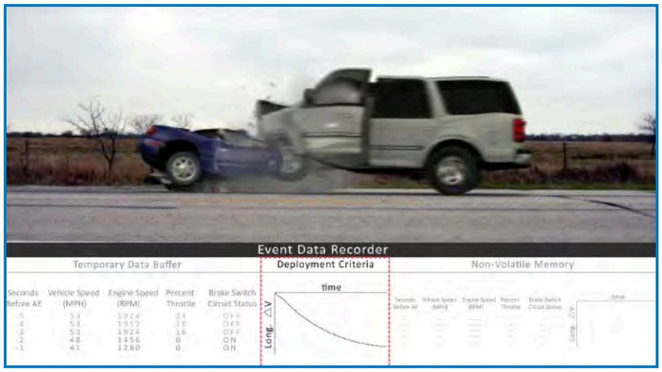
- A motorist drives an SUV on a rural highway at a constant speed of 53 mph. As the vehicle traverses the highway, various sensors within the vehicle continually transmit data along a common communication network. The ACM monitors this incoming data and performs its primary function of periodic self-diagnostic routines to ensure the system is ready to deploy airbags, if needed. Approximately once every second, data such as vehicle speed, engine speed, throttle and brake usage is retained in a temporary memory location. As new data is received, the oldest data element is discarded and the new data replaces it in what is referred to as a circular buffer. The data table on the lower left of the graphic below is representative of the output of a CDR system report.

- Suddenly, an oncoming motorist allows their vehicle to drift over the centerline, directly in the path of the SUV. The driver of the SUV reacts to the oncoming vehicle and attempts to avoid the collision by braking - all the while, the temporary memory buffer is continues to update, retaining pre-crash data that will aid investigators in determining what, if any, evasive maneuvers were performed by the driver of the SUV. In the graphics below, the newest data elements pertaining to the evasive maneuver are added to the bottom of the buffer.

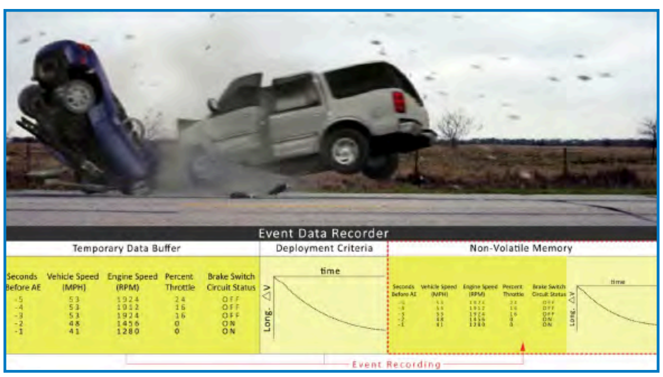


- As the vehicles collide, the SUV experiences sudden accelerations and the collision detection system within the ACM is triggered. This is called Algorithm Enable (AE), the point at which the system begins its secondary function: to analyze the collision and determine whether or not to deploy supplemental restraints (seatbelt pretensioners and airbags). This determination is based on monitoring the acceleration and velocity change of the vehicle. Since collisions often last only fractions of a second, the ACM examines acceleration and speed change at a rate of hundreds of times per second.

- In this scenario, due to the severity of the impact and the circumstances surrounding the collision, the ACM determines the deployment of seatbelt pretensioners and frontal airbags are appropriate and these restraints are deployed.



- Once the ACM completes its primary (system readiness) and secondary (restraint deployment) functions, the module performs the additional process of recording the data held within the temporary memory buffer into a more robust, non-volatile memory (memory that can be retained even after the power to the module has been turned off). The data stored in non-volatile memory includes the pre-crash data: vehicle speed, engine speed, throttle and brake use as well as the crash related acceleration/velocity change versus time data. This data can be retrieved after the crash to aid in the post-crash investigation.



Application of EDR Data

As the accident reconstruction and automotive safety sectors began to examine EDRs in the 1990's, entities such as the National Traffic Safety Board (NTSB), the National Aeronautics and Space Administration (NASA) and the National Highway Traffic Safety Administration (NHTSA) began to recognize the potential of this technology and recommended the expansion of EDR implementation. In 2001, NHTSA's EDR Working Group reported in their Summary of Findings, that "EDRs have the potential to greatly improve highway safety, for example, by improving occupant protection systems and improving the accuracy of crash reconstructions[6]."

Since that report, the accident reconstruction community has researched and evaluated the performance of EDRs in controlled crash tests as the basis for numerous peer-reviewed publications. This research has shown EDRs to be highly accurate and repeatable. For example, Neihoff, et al. found the EDRs they tested in frontal crashes to be accurate within ± 6%, with some EDRs "almost exactly duplicating the crash test instrumentation[7]."

Such validation studies illustrate that EDR data is an invaluable tool for the accident reconstructionist, not only in catastrophic instances involving a deployment of supplemental restraints, as well as in low-speed, non-deployment collisions in situations where physical evidence is insufficiently documented and the lack of significant vehicle damage make more traditional reconstruction methods difficult.

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6. Department of Transportation, National Highway Traffic Safety Administration, "Event Data Recorders: Summary of Findings by the NHTSA EDR Working Group: Final Report", August 2001.

7. Neihoff, P., et al., "Evaluation of Event Data Recorders in Full Systems Crash Tests," Proceedings of the 19th International Conference on Enhanced Safety of Vehicles, Paper No. 05-0271-O, 2005.