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NEWS RELEASE

Date: October 22, 2013

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FOR IMMEDIATE RELEASE

Incident: Crash Investigation Technology Information

Date Occurred: October 22, 2013

Time Occurred:

Location: Lincoln County Sheriff's Office

Summary:

The Lincoln County Multi-Agency Crash Team (MACT) is now utilizing a sophisticated Crash Data Retrieval system to obtain information from vehicles involved in collisions. This system is able to image, or essentially make a copy of, information stored on the device that is responsible for deciding when to deploy a vehicle's airbags and other safety restraint systems. While different manufacturers have different terminology for these devices, they are generally called Airbag Control Modules, or ACMs.

ACMs have been present in most domestically manufactured passenger vehicles since the mid-1990s or early 2000s. As technology progresses, the information captured by the ACMs becomes more detailed and contains more parameters. While an older vehicle may only log speed or one-dimensional collision forces, newer vehicles have the ability to report seating position, passenger weight, throttle percentage, steering input or even cruise control settings. The number of vehicles with ACMs expands all the time, and is now expanding greatly in part due to a federal rule requiring vehicles sold with airbags in the United States to have the ability to provide ACM data when it is recorded.

There are two basic types of events the system records: deployment events and non-deployment events. A deployment event is generally recorded anytime the ACM deploys an airbag, seatbelt pretensioner, active head restraint, or other device that has to be reset by a mechanic. Non-deployment events are recorded when the vehicle encounters a circumstance that causes the ACM to begin a deployment algorithm (similar to a checklist) but all criteria are not met for the deployment of supplemental restraints. Non-deployment events can be recorded in low speed collisions, high speed collisions where airbags were not needed, or a significant jarring of the vehicle (sometimes even a curb or pothole can cause this).

It should be noted that the ACM does not record information like locations, dates, or who may have been riding in the car. These systems are not like "black boxes" that are found in aircraft. Aircraft "black boxes" record hours of telemetry, location data, and conversations inside the aircraft and over the radio.

ACM data is normally limited to seconds before collision and to milliseconds during and after the crash and does not include a video or audio recording. ACMs only provide a collection of data from other sensors in the vehicle.

The CDR system has the ability to image stored data and generate a logical report to be analyzed by those with the appropriate certification. The CDR image does not modify or remove the data on the ACM and can be likened to taking a picture of the evidence there. It is for this reason the proper term for the interaction between the Crash Data Retrieval System and Airbag Control Module is called an image instead of a download.

The ACM system operates independently of a car's computer and is a robust unit mounted in a safe location away from areas of the car normally damaged in crashes. It is because of this that many vehicles are still able to be imaged despite extensive damage. When combined with traditional collision reconstruction methods, the CDR allows investigators to improve vehicle design and safety, but also identify who may be at fault in a collision.

The Lincoln County Multi-Agency Crash Team (MACT) has several members from different MACT member agencies who are certified to image and analyze crash data. Crash data imaging and analysis is generally only conducted when a collision takes place and one of the subjects involved may be criminally charged, but the CDR system can be used in other cases if requested by any law enforcement agency.

For more information regarding the Crash Data Retrieval system please contact Sergeant Mark Meister via e-mail at Mmeister@co.lincoln.or.us or by telephone at (541) 265-0684.