

## **Ralph's Accident Reconstruction Newsletter**

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It is very important to remember that, despite all the additional data which may appear in downloads from ACMs and/or PCMs, these data sets are still no substitute for a reconstruction. They may contain some data that may not otherwise be available after a collision, but much of the data will simply augment or verify the reconstruction. And some of the data may not be valid for a given collision. As an example, consider the situation where a driver has applied his brakes heavily and locked and skidded the tires on his non-ABS-equipped vehicle. Since the speed indicated in the table which is part of the CDR report is based on data supplied by the Vehicle Speed Sensor (VSS), and since the VSS is connected to the drive wheels, heavy braking can result in a vehicle with forward motion, skidding on drive tires, which the VSS reports as zero mph. Testing has also demonstrated that there is some discrepancy between the VSS-reported speed and the actual vehicle speed when the vehicle has ABS and brakes have been applied, but the differences there are almost always small.

Some states have passed legislation regarding accessing the data in ACMs. It seems that many people have wrong impressions of what information gets stored, when it gets stored, how it gets stored, why it gets stored, what it means, and how it can be accessed. Some misinformed persons believe that police can access this data remotely, either in a “drive-by” reading or by satellite. Not yet! And probably never.

Staged collisions using highly accurate accelerometers and vehicles of known weights and speeds have demonstrated the general accuracy and reliability of crash data stored in many of the current ACMs. Others are not as accurate, but knowing the performance characteristics of the various models will allow useful data to be collected and evaluated for most situations. And perhaps some cars will never have accessible data.

Most heavy trucks now also have the capability to record certain parameters of vehicle operation related to specific events, such as a sudden vehicle stop, sudden engine stop, or other unusual change in operation. Some of these have to be set up to save the data, and the owners haven't made the necessary changes. Some are pre-set at the factory to record data under certain pre-determined circumstances. I do not have the capability to access data recorders in heavy trucks, and I don't plan to provide that service, but I can find a qualified person to provide heavy-truck data downloads, if you have need.

Time marches on. I continue to age, as does Katherine. (My wife never ages, but she has a portrait in the attic . . . ☺ And Katherine is only six.) I have changed the picture I include on the panel to the right with a more recent photo of the three of us.

Thank you for reading my current newsletter. Please call me for event data recorder downloads, accident reconstructions, filament examinations, component failure evaluations, or other vehicle-related services whenever the need arises.

**Ralph Cunningham, Inc.**  
**Accident Reconstruction**  
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