

# Beyond Event Data Recorders: Analysis of Vehicle Safety Systems in Support of Accident Reconstruction

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**I**n the field of accident investigation and reconstruction, we are often faced with investigations related to suspicious claims, misleading information or even staged collisions. Often the vehicles involved in these situations include some type of deployable safety restraint system (e.g., airbags or seatbelt pre-tensioners).



Airbags and airbag control modules are apparently among the least-understood areas for those involved in staged collisions, or those attempting to misrepresent their claim with misleading information.

While almost every vehicle on the road today contains frontal airbags for the driver and right front passenger, many vehicles now include integrated safety systems that may also employ seatbelt pre tensioners, side thorax airbags and side curtain airbags, among other things. Some vehicles will also have some data recording capability associated with the airbag system, along with other vehicle system parameters that can be stored in the event of a crash. We often refer to vehicles that have this capability to record data as having an event data recorder (EDR); however, this term can be somewhat

