

Event Data Recorders and Their Role in Automobile Accident Litigation

by **Jason A. Koch**

jkoch@jllaw.com



**8519 Eagle Point Boulevard, Suite 100
Lake Elmo, Minnesota 55042-8624
(651) 290-6500**

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I. Event Data Recorder functions

Event data recorders (“EDRs” or auto “black boxes”) are devices that record and store crash data associated with vehicle air bag systems.¹ They have been defined as “an on-board device or mechanism capable of monitoring, recording, displaying, storing or transmitting pre-crash, crash, and post-crash data element parameters from a vehicle, event and driver.”² The primary purpose of EDRs is to determine whether a vehicle’s air bag should deploy.³ But over the years, the information stored in EDRs has become more sophisticated and accessible to accident reconstructionists.⁴ EDRs installed in newer vehicles record and store up to five seconds of pre-crash data including vehicle speed, engine throttle position, engine revolutions per minute, and brake status.⁵ An accident reconstructionist may download this data to determine, among other things, whether the driver was speeding, applied his/her brakes prior to the crash, and/or was using his/her seatbelt at the time of the crash.⁶ This information may have a significant effect on how an attorney or adjuster values a claim.

In 2004, an estimated 40 million registered passenger vehicles and light trucks manufactured by General Motors and Ford contained an EDR.⁷ Therefore, it is important to determine, as soon after an accident as possible, whether the vehicles involved are equipped with an EDR. If accepted as reliable by the courts, EDRs may provide the most credible and objective insight into the facts of a crash.⁸

Although EDRs can be very useful in accident reconstruction, they are limited by the data they gather and store.⁹ For example, movements relating to rear-end and side-impact crashes often will not be recorded by EDRs.¹⁰ Additionally, in a partially frontal impact where a vehicle is rotating, spinning, or skidding sideways, significant information regarding

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the vehicle's speed and movements cannot be measured by the air-bag sensors and will not be recorded.¹¹

II. Event Data Recorders in the Courts

Although a Minnesota appellate court has not yet addressed the admissibility of EDR information, several other courts have addressed this issue. The following is a brief summary of how courts have handled the issue of EDR information. In *Sipes v. General Motors Corp.*, there was an issue as to whether the airbag in the plaintiff's vehicle should have deployed.¹² Defendant argued that the EDR was examined and showed that the airbag system was functioning properly and that there was not a collision in which the airbag should have deployed.¹³ The court noted that "[c]ertainly, this is strong evidence if it is shown that the [EDR] itself is functioning properly, but it is not irrefutable evidence that conclusively establishes a fact as a matter of law in the face of other contradictory evidence. Our judicial system has never accepted computers or [EDRs] to decide ultimate issues in lieu of courts and juries."¹⁴

In *Harris v. General Motors Corp.*, the plaintiff alleged that the airbag in her 1991 Chevrolet Corsica deployed after a minor accident, causing her damages.¹⁵ General Motors moved for summary judgment, submitting affidavits of two experts.¹⁶ In response, plaintiff submitted her affidavit and the affidavit of her passenger.¹⁷ The district court granted General Motor's motion for summary judgment.¹⁸ On appeal, the 6th Circuit Court of Appeals reversed. One of General Motors' experts testified that the EDR data "suggests" the air bag functioned properly and deployed during the plaintiff's accident.¹⁹ The 6th Circuit held, in part, that the expert's testimony failed to establish the "undisputed physical facts" necessary to justify rejection of [plaintiff's] testimony."²⁰ The court also included a footnote

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directing the district court, on remand, to conduct a *Daubert* analysis of the proposed testimony.²¹

In a more recent case, a state appellate court upheld a district court's decision to admit EDR evidence at trial, following a *Frye* hearing. In *Bachman v. General Motors Corp.*, the plaintiffs alleged that the air bag in the defendant's 1996 Chevrolet Cavalier deployed prior to, and caused, a collision.²² A jury returned a verdict in favor of defendants.²³ On appeal, plaintiffs asserted, among other things, that the district court erred in admitting evidence and related testimony regarding data downloaded from the Cavalier's EDR.²⁴ Prior to trial, the District Court held a *Frye* hearing to determine the admissibility of the EDR evidence.²⁵ At the *Frye* hearing, experts for General Motors opined that the deployment and crash event data recorded by an EDR is generally accepted as reliable and accurate by the automobile industry and the National Highway Traffic Safety Administration (NHTSA).²⁶ The district court then denied plaintiff's motion in limine and determined that the data downloaded from the EDR was admissible under both the *Frye* and *Frye-plus-reliability* standards.²⁷ The appellate court held that the district court did not abuse its discretion in admitting EDR data into evidence.²⁸ In so holding, the appellate court stated that "the process of recording and downloading [EDR] data does not appear to constitute a novel technique or method."²⁹ The court also noted that the NHTSA relies on this information and that the information is available to all researchers and investigators via the Vetronix Corporation system.³⁰

In the criminal context, courts have upheld the downloading of EDR data over Fourth and Fourteenth Amendment challenges.³¹ Moreover, the court in *Christman*, relying on *Bachman*, determined that data recorded on an EDR was generally accepted as reliable and accurate by the automobile industry and the NHTSA.³² Finally, the court determined that the

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EDR evidence, along with other accident reconstruction evidence, was sufficient to prove, beyond a reasonable doubt, that the defendant was speeding.³³

The admissibility of EDR evidence was also raised in *People v. Hopkins*.³⁴ There the court stated that “[i]n this case, the court is persuaded, based upon its review of the cases and other supporting documentation submitted by the People, and in the absence of any contrary or contradictory evidence, that the [EDR] module technology has been generally accepted as reliable in the relevant scientific community.”³⁵

In *Matos v. State*, the District Court of Appeal of Florida relied on *Bachman* in determining that EDR data was admissible.³⁶ There, the court stated: “[t]he process of recording and downloading [EDR] data is not a novel technique or method. In any event, the state demonstrated that when used as a tool of automotive accident reconstruction, the [EDR] data is generally accepted in the relevant scientific field, warranting its introduction.”³⁷

Therefore, although not yet addressed in a Minnesota appellate court, courts in other jurisdictions have generally found EDR evidence admissible in both civil and criminal cases.

III. Event Data Recorder Legislation

As of the date of this article, Arkansas, California, New York, Nevada, North Dakota, and Texas have enacted statutes regulating the information stored in EDRs.³⁸ The North Dakota statute requires that the presence and capabilities of the EDR be disclosed to the owner and prohibits, with certain exceptions, persons, other than the owner from accessing the information.³⁹ Importantly, the law specifically states that “[a]n insurer may not require as a condition of insurability consent of the owner for access to data that may be stored within an event data recorder and may not use data retrieved with the owner’s consent before or after an accident for the purpose of rate assessment.”⁴⁰

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Similarly, Arkansas law requires disclosure of an EDR and its capabilities and grants ownership of that data to the vehicle's owner.⁴¹ But the statute also states that the "ownership of the data shall not pass to a lienholder or to an insurer because the lienholder or insurer succeeds in ownership to the vehicle as a result of the accident."⁴² Moreover, Arkansas prevents an insurer or lienholder from using EDR data "for any reason without a written consent" of the owner.⁴³ Finally, an insurer or lienholder may not make an owner's consent to use of EDR data: (1) a condition of a policy or (2) conditioned upon the payment or settlement of an obligation or claim.⁴⁴

Minnesota has recently taken steps to enact legislation governing EDRs.⁴⁵ Minnesota House File 3013 went before the House on March 1, 2006.⁴⁶ The proposed legislation would require a manufacturer of a new motor vehicle to disclose the existence of an EDR.⁴⁷ The bill would also require the manufacture to disclose the specific items of information stored in the EDR.⁴⁸

Most importantly, the bill states that:

[e]xcept as otherwise provided in this section, data recorded by an event recording devise may not be downloaded or otherwise retrieved by a person other than the registered owner of the vehicle, except that data recorded by an event recording device may be downloaded or otherwise retrieved by a person other than the registered owner of the vehicle if:

- (1) the registered owner of the vehicle consents to the retrieval of the data;
- (2) a court of competent jurisdiction orders the retrieval;
- (3) the data is retrieved for the purpose of conduction research to improve motor vehicle safety . . . provided that the identity of the registered owner or driver is not disclosed in connection with the retrieval of that data. . . .

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- (4) the data is retrieved by a new vehicle dealer or a vehicle repair facility to diagnose, service, or repair the motor vehicle; or
- (5) the retrieval is pursuant to an agreement for subscription services for which disclosure required by subdivision 4 as been made.⁴⁹

A violation of the proposed bill would be a misdemeanor.⁵⁰ But unlike the North Dakota and Arkansas statutes, the legislation currently being considered in Minnesota does not place restrictions on insurers.

Along with Minnesota, legislation is currently pending in Alaska, Connecticut, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, Pennsylvania, Rhode Island, Tennessee, West Virginia, and Wisconsin.⁵¹

Because of the recent increase in EDR legislation, it is important that insurers and attorneys understand the law governing EDRs before attempting to access this information.

CONCLUSION

EDRs have become more popular and sophisticated over the past several years. The information stored on EDRs has become very useful in both civil and criminal trials and has been held to be admissible under the *Frye* standard. As ownership and use of EDR information is currently being considered in several state legislatures, it is important that attorneys and insurers are aware of the law so that they may effectively and legally use EDR information.

¹ See David M. Katz, *Privacy in the Private Sector: Use of the Automotive Industry's "Event Data Recorder" and Cable Industry's "Interactive Television" in Collecting Personal Data*, 29 RUTGERS COMPUTER & TECH. L.J. 163, 169-170 (2003).

² *Id.* at 169 (citations omitted).

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³ See W.R. “Rusty” Haight, *Automobile Event Data Recorder (EDR) Technology – Evolution, Data, and Reliability*, at <http://www.accidentreconstruction.com/research/edr/docs/EDRPaperRHaight.pdf>. (2001).

⁴ *Id.*

⁵ *Id.*

⁶ TRANSPORTATION RESEARCH BOARD, NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM, (Document 75 (Project 17-24)) USE OF EVENT DATA RECORDER (EDR) TECHNOLOGY FOR HIGHWAY CRASH DATA ANALYSIS, 97 at http://www-nrd.nhtsa.dot.gov/edr-site/uploads/EDR_Technology.pdf. (Dec. 2004).

⁷ *Id.* at 15.

⁸ Katz, *supra* note 1, at 177.

⁹ Dennis Donnelly, *Black Box Technology in the Courtroom*, 38-APR TRIAL 41 (April 2002).

¹⁰ *Id.*

¹¹ *Id.*

¹² 946 S.W.2d 143 (Ct. App. Tex. 1997).

¹³ *Id.* at 153.

¹⁴ *Id.*

¹⁵ 201 F.3d 800, 802 (6th Cir. 2000).

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ *Id.* at 804.

²⁰ *Id.*

²¹ *Id.* fn. 2.

²² 776 N.E.2d 262 (Ill App. 2002).

²³ *Id.* at 765.

²⁴ *Id.*

²⁵ *Id.*

²⁶ *Id.* at 767.

²⁷ 776 N.E.2d at 770.

²⁸ *Id.* at 778.

²⁹ *Id.* at 779.

³⁰ *Id.* at 780.

³¹ See *People v. Christman*, 776 N.Y.S.2d 437 (2004).

³² *Id.*

³³ *Id.*

³⁴ 800 N.Y.S.2d 353 (2004).

³⁵ *Id.*

³⁶ 899 So.2d 403 (2005).

³⁷ *Id.* at 407.

³⁸ Harris Technical Services, Traffic Accident Reconstructionists at <http://www.harristechnical.com/cdr7.htm> (last visited April 4, 2006).

³⁹ N.D. CENT. CODE § 51-07-28 (2005).

⁴⁰ *Id.*

⁴¹ ARK. CODE ANN. § 27-37-103 (2005).

⁴² *Id.*

⁴³ *Id.*

⁴⁴ *Id.*

⁴⁵ H.F. NO. 3013, 84TH LEG. SESS. (Minn. 2006).

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ *Id.*

⁵⁰ *Id.*

⁵¹ Harris Technical Services, *supra* note 38.