Vehicle Black Boxes

With every aviation accident involving an aircraft of sufficient size, answers concerning the cause of the event are inevitably sought from the “black box.” What might well come as a surprise to the average automobile driver, however, is that many late-model vehicles on the roads in the United States contain similar technology. Will the day come when evidence regarding the cause of automobile crashes is also routinely expected to come from black boxes, and will the answer to this question come from courts, or legislatures?

An Event Data Recorder, sometimes referred to as a “black box,” is an electronic sensor that records information such as the speed of a vehicle immediately before a crash, whether the driver was wearing a seatbelt, engine revolution speed, and brake application.¹ When

¹ The devices found in GM vehicles are called Sensing and Diagnostic Modules and the devices installed in certain Ford vehicles are called Restraint Control Modules. To date GM and Ford are the only manufacturers that have licensed a third party to use the software required to download data from their black boxes. Both GM and Ford have
downloaded from a vehicle after a crash, the data from a black box can provide compelling, and unbiased, proof of certain facts. However, until 2000, information from a black box in a vehicle could be downloaded only by the vehicle’s manufacturer. This changed when Vetronics began marketing its Crash Data Retrieval system to law enforcement agencies, crash reconstructionists, the insurance industry, and others. As the hardware needed to download information from a black box becomes more available, it would seem likely to expect issues concerning the collection, preservation and admissibility of this evidence to become more common.

Courts have held that the technology involved in vehicle black boxes meets the “generally accepted in the scientific community” admissibility standard of Frye v. United States, 293 F. 1013 (D.C. Cir. 1932). Vetronics licenses with Vetronix, which has developed a hardware and software system called the Vetronix Crash Data Retrieval system. This system is commercially available for purchase by law enforcement agencies, insurance companies, and others. According to information on Vetronix’s website, they anticipate working with other automobile manufacturers to reach agreements to license their software as well. http://www.vetronix.com (Last accessed on August 17, 2005). For a discussion of the technology behind event data recorders, see Augustus “Chip” Chidester, et al., Recording Automotive Crash Event Data, International Symposium on Transportation Recorders, May 3 – 5, 1999.

1923) in both the civil and criminal contexts. Some courts have been persuaded to admit the evidence without the necessity of a Frye hearing, or without the testimony of an expert to explain the science underlying black boxes. There is little reason to think that the science behind a vehicle black box would not also meet the admissibility test of Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993). However, it appears possible that out of concerns over privacy state legislatures may take actions that will significantly impact the collection and use of vehicle black box evidence in the future.

In 2004, California became the first state to address vehicle black boxes with legislation. The California statute requires the manufacturer of any new motor vehicle sold or leased in that state which is equipped

---


6 Harris v. General Motors Corp., 201 F.3d 800 (6th Cir. 2000). In reversing the decision of the district court granting the defendant’s motion for summary judgment, the Sixth Circuit noted that a Daubert issue had not been raised regarding the admissibility of the opinion of an expert that data from the vehicle’s black box “suggests the supplemental restraint system (SIR) functioned as designed by deploying during the plaintiff’s accident . . .” Id. at 804. The Sixth Circuit held that in that particular case the testimony of the experts was not so conclusive as to establish undisputed physical facts that would overcome the testimony of the plaintiff and her passenger in response to a motion for summary judgment.
with a black box recording device to “disclose that fact in the owner’s manual for the vehicle.” More importantly, the statute limits the circumstances under which the data recorded on a black box can be retrieved by someone other than the registered owner of the vehicle. Those circumstances are: (1) when the owner of the vehicle consents; (2) when a court of competent jurisdiction orders that the data be retrieved; (3) when it is retrieved for the purpose of servicing or repairing the vehicle; (4) and when it is retrieved for the purpose of improving motor vehicle safety. In this final circumstance, the identity of the owner or driver cannot be disclosed, and the data can only be released to the motor vehicle safety and medical research communities.

In the case of a vehicle collision that might result in a criminal prosecution, it seems that obtaining a proper search warrant would fulfill

---

7 Cal. Vehicle Code § 9951(a). If the capability to record and transmit information is part of a subscription service, then it must be disclosed in the subscription agreement that information may be recorded or transmitted. Cal. Vehicle Code § 9951(e). “Recording device” is defined in the statute as a device installed by the manufacturer for the purpose of retrieving data after an accident which does one or more of the following things: “(1) Records how fast and in which direction the motor vehicle is traveling. (2) Records a history of where the motor vehicle travels. (3) Records steering performance. (4) Records brake performance, including, but not limited to, whether brakes were applied before an accident. (5) Records the driver’s seatbelt status. (6) Has the ability to transmit information concerning an accident in which the motor vehicle has been involved to a central communications system when an accident occurs.” Cal. Vehicle Code § 9951(b).

8 Cal. Vehicle Code § 9951(c). This section is not applicable to subscription services when disclosure of recording capability is included in the subscription contract. Cal. Vehicle Code § 9951(e).

9 Cal. Vehicle Code § 9951(c)-(d).
the requirement for a court order. However, an issue that is not addressed by the California statute is preservation of the data from a black box after an accident and before civil litigation is filed where there is no reason for a law enforcement agency to obtain a search warrant. The statute does leave open the possibility that automobile insurance companies will take steps to make certain black box data is preserved and available by requiring their policy holders to consent to retrieval of data.

In 2005, Arkansas, Nevada, North Dakota and Texas joined California in enacting black box legislation, and legislation was introduced in eleven other states.\(^\text{10}\) Nevada’s statute, which takes effect on January 1, 2006, is very similar to California’s.\(^\text{11}\) North Dakota’s statute is also similar to California’s in most respects, but it imposes on manufacturers and automobile dealers the obligation to inform


\(^{11}\) Nevada Assembly Bill No. 315 amending Chapter 484 of Nev. Rev. Stat.
customers of the existence of a black box in the vehicle.\textsuperscript{12} More importantly, the North Dakota statute prohibits insurance companies from requiring consent to retrieval of data from black boxes as a condition to providing insurance coverage.\textsuperscript{13}

Texas too generally followed the California legislative model.\textsuperscript{14} The Texas legislature did not restrict insurance companies from obtaining consent to retrieve data, but it did spell out when a court order for retrieval of information may be obtained.\textsuperscript{15} The statutory standard applicable to civil actions, “necessary to protect the public safety,” may well be so difficult to meet that court ordered retrieval of data from vehicle black boxes will not occur in civil actions in Texas.

The legislation passed in Arkansas is substantially different from California’s statute. In Arkansas, a consumer who purchases a new

\textsuperscript{12} North Dakota Senate Bill No. 2200 section 1, creating a new section to chapter 51-07 of N.D. Cent. Code. A requirement that the owner be given the option to disconnect the recording device was considered, but ultimately not adopted.

\textsuperscript{13} North Dakota Senate Bill No. 2220 section 1.6.


\textsuperscript{15} To obtain a court order for data retrieval, is it necessary to show that: “(1) retrieval of the information is necessary to protect the public safety; or (2) the information is evidence of an offense or constitutes evidence that a particular person committed an offense.” Texas House Bill No. 160, section (d).
vehicle from a dealership must be given written notice of the fact that
the vehicle is equipped with a data recorder. This notice must include a
description of the device and the type of data recorded.\textsuperscript{16} The data
recorded by a vehicle black box is, pursuant to this statute, private, and
exclusively the property of the owner of the vehicle.\textsuperscript{17} A written release
signed by all owners of a vehicle is required for a vehicle owner to give
consent to retrieval of data from a black box.\textsuperscript{18} Lienholders and insurers
are prohibited from making consent to retrieval a condition of the
payment or settlement of a claim or obligation. Moreover, consent to
retrieval of data cannot be made a provision of an insurance policy or
vehicle lease.\textsuperscript{19} Consent of the owner is not required if retrieval of the
data is pursuant to an order of a “court of competent jurisdiction in
Arkansas,”\textsuperscript{20} or if a law enforcement officer obtains the data based on a


\textsuperscript{17} Ark. Code Ann. § 27-37-103(c). Subsections (c), (d), (f), (g) and (h) do not apply where the capability to record
and store information is part of a subscription service and the subscription agreement discloses that the information
may be recorded or dispensed. Ark. Code Ann. § 27-37-103(j).

\textsuperscript{18} Ark. Code Ann. § 27-37-103(d).

\textsuperscript{19} Ark. Code Ann. § 27-37-103(e).

finding of probable cause.\textsuperscript{21} The owner’s consent is also not required if a “law enforcement officer, a firefighter, or an emergency medical services provider obtains the data in the course of responding to or investigating an emergency involving physical injury or the risk of physical injury to any person.”\textsuperscript{22} Finally, the Arkansas legislature expressly provided that data from black boxes will not be admitted as evidence in a civil or criminal trial unless the court finds it is relevant and reliable.\textsuperscript{23}

Black box legislation was proposed in eleven additional states in 2005.\textsuperscript{24} Clearly, there is a trend toward regulating the collection and use


\textsuperscript{22} Ark. Code Ann. § 27-37-103(f)(3). Judicial interpretation of this particular provision of the statute seems likely to be required. Like California, Arkansas allows use of the data from a vehicle black box for the purpose of servicing or repairing the vehicle, Ark. Code Ann. § 27-37-103(h)(3), or for medical research if the identity of the owner or driver is not disclosed. Ark. Code Ann. § 27-37-103(h)(2). The Arkansas statute also allows retrieval of the data by the Arkansas State Highway and Transportation Department for limited purposes related to commercial drivers, Ark. Code Ann. § 27-37-103(g), or to facilitate providing emergency medical care in the event of a crash. Ark. Code Ann. § 27-37-103(h)(1).

\textsuperscript{23} Ark. Code Ann. § 27-37-103(i).

\textsuperscript{24} Of the eleven additional states where black box legislation was proposed, eight considered model legislation like the statute enacted in California. Alaska S.B. No. 18; Massachusetts H.B. 1973, H.B. 2092; New Hampshire H.B. 599; New Jersey Assembly Bill No. 2090; New York Assembly Bill No. 872, S.B. 852; Tennessee S.B. 1850, H.B. 1303; Virginia H.B. 2134, H.B. 697, H.B. 2468; and West Virginia H.B. 2850.

The Tennessee General Assembly was also presented with an alternative bill that includes a provision allowing downloading of information from a black box without the owner’s consent if the owner files a products liability action, and a provision that information obtained in violation of the provisions of the act will not be admissible in court. Tennessee H.B. 1304, S.B. 1806.
of information from black boxes. Absent a malfunction that would render a device inaccurate and assuming that expert testimony is presented to interpret the data recorded, black boxes offer objective proof of certain facts, such as vehicle speed in the last seconds before a crash. Is the apparent concern about the collection this information from black boxes warranted? Does requiring notice in an owner’s manual adequately address concerns that consumers all unaware of the existence of the devices? Driving an automobile on public streets and highways is certainly a regulated activity that is undertaken in public. Is a privacy interest in this context legitimate? If the legislative trend continues, one can only hope that state legislature give careful consideration to the problems they are addressing.

New York was also presented with a bill specifically allowing law enforcement agencies to collect and use date from black boxes in vehicles. New York Assembly Bill 6093. The Connecticut General Assembly considered a proposal prohibiting law enforcement personnel from obtaining access to data from a vehicle black box except by warrant, or with the owner’s consent. Connecticut S.B. 824. The bill considered in Pennsylvania provides that the seller as lessor of a vehicle containing a black box must give notice of the information that can be recorded, and the fact that it might be used as evidence in legal proceedings. An additional provision considered by the Virginia legislature would have prohibited insurance companies from requiring consent to provide access to black box data as a condition of insurance. Virginia H.B. 2135.

The bill introduced in Montana would prohibit sale of a vehicle equipped with a black box incapable of being deactivated and would make violation of the act an unfair trade practice subject to substantial penalties. The Act would also prohibit downloading data without an owner’s consent, or without a court order showing a compelling state interest in the release of the information. Montana H.B. 322.