

# What's The Future Of The Automobile 'Black Box'?

## Data Recorders Are Now Common And May Have A Use In Litigation

By Michael M. Bowden

A few years ago, the advent of the automotive "black box" – a common on-board device similar to the data recorders on commercial airliners – seemed poised to change accident litigation forever.

That still hasn't happened. But as engineers continue to develop and refine black-box technology, some lawyers remain convinced this data will soon be indispensable in most automobile-crash cases.

And with good reason: The automotive "black box" is a series of on-board mini-computers that record, for example, a car's speed and throttle position, the status of its seatbelts, brakes, steering wheel and signaling devices, and its Delta-V (loss of velocity) numbers – all vital information in determining the cause of an accident. At the moment of a collision, this data is saved in the black box along with changes during the seconds before impact.

Such information is the very fulcrum upon which crash cases are won or lost. (For a full discussion of the potential uses and issues of this technology in litigation, see "Black Box Will Revolutionize Auto Litigation," 99 LWUSA 729, Search Words for LWUSA Archives: "Black Box" and Bowden.)

So why hasn't black-box data taken the litigation world by storm?

There are three main reasons, experts say: (1) Many plaintiffs' lawyers don't know the data exists, and therefore don't try to obtain it; (2) access to the data is jealously guarded by automakers, and therefore difficult and expensive to obtain through discovery; and (3) once obtained, the data is subject to



gy will eventually "change the way cases are litigated," he sees no real signs of change on the horizon.

But that's not for lack of interest, says Matthew Floumoy, who is probably the nation's best-informed plaintiffs' lawyer on the subject of black-box technology. After being interviewed by several national news outlets about the Georgia case (for which he and Wight joined forces), he was contacted by plaintiffs' lawyers around the country who were interested in learning more about the use of black-box data in accident cases.

"I've received calls from Pennsylvania, New York, California – just about every state, really," he says.

The tiny black box hidden in many cars (below) has the potential to provide information on deceleration, speed-of-impact and braking – information that could prove crucial in future auto accident cases. The readouts from the boxes (at right) still must be interpreted by specialists.

SIR SIR EEPROM DATA

Write in DATE: 09/11/97

Write in VIN: 1G1JC5241N17572D

ROM identifications: 06

0400:	00 00 40 00 00 00 00 00
0404:	00 00 00 00 00 00 00 00
0410:	00 00 00 00 00 03 F9 F9
0414:	F9 1C 00 00 00 00 FF 00
0420:	00 00 40 00 00 00 00 00
0424:	00 00 40 00 00 00 00 00
0430:	00 00 00 00 00 00 00 00
0434:	00 00 00 00 00 00 00 00
0440:	00 00 00 00 00 00 00 00
0444:	00 00 00 00 00 00 00 00
0450:	00 00 00 00 00 00 00 00
0454:	00 00 00 00 00 00 00 00
0460:	00 00 00 00 00 00 00 00
0464:	00 00 00 00 00 00 00 00
0470:	00 00 00 00 00 00 00 00
0474:	00 00 00 00 00 00 00 00
0480:	00 00 00 00 00 00 00 00
0484:	00 00 00 00 00 00 00 00
0490:	00 00 00 00 00 00 00 00
0494:	00 00 00 00 00 00 00 00
0500:	00 00 00 00 00 00 00 00
0504:	00 00 00 00 00 00 00 00
0510:	00 00 00 00 00 00 00 00
0514:	00 00 00 00 00 00 00 00
0520:	00 00 00 00 00 00 00 00
0524:	00 00 00 00 00 00 00 00
0530:	00 00 00 00 00 00 00 00
0534:	00 00 00 00 00 00 00 00
0540:	00 00 00 00 00 00 00 00
0544:	00 00 00 00 00 00 00 00
0550:	00 00 00 00 00 00 00 00
0554:	00 00 00 00 00 00 00 00
0560:	00 00 00 00 00 00 00 00
0564:	00 00 00 00 00 00 00 00
0570:	00 00 00 00 00 00 00 00
0574:	00 00 00 00 00 00 00 00
0580:	00 00 00 00 00 00 00 00
0584:	00 00 00 00 00 00 00 00
0590:	00 00 00 00 00 00 00 00
0594:	00 00 00 00 00 00 00 00
0600:	00 00 00 00 00 00 00 00
0604:	00 00 00 00 00 00 00 00
0610:	00 00 00 00 00 00 00 00
0614:	00 00 00 00 00 00 00 00
0620:	00 00 00 00 00 00 00 00
0624:	00 00 00 00 00 00 00 00
0630:	00 00 00 00 00 00 00 00
0634:	00 00 00 00 00 00 00 00
0640:	00 00 00 00 00 00 00 00
0644:	00 00 00 00 00 00 00 00
0650:	00 00 00 00 00 00 00 00
0654:	00 00 00 00 00 00 00 00
0660:	00 00 00 00 00 00 00 00
0664:	00 00 00 00 00 00 00 00
0670:	00 00 00 00 00 00 00 00
0674:	00 00 00 00 00 00 00 00
0680:	00 00 00 00 00 00 00 00
0684:	00 00 00 00 00 00 00 00
0690:	00 00 00 00 00 00 00 00
0694:	00 00 00 00 00 00 00 00
0700:	00 00 00 00 00 00 00 00
0704:	00 00 00 00 00 00 00 00
0710:	00 00 00 00 00 00 00 00
0714:	00 00 00 00 00 00 00 00

interpretation, resulting in complex, highly technical "battles of the experts."

But it is precisely this defense reluctance to allow access to black-box data that has convinced some plaintiffs' lawyers that it's worth going to the mat to obtain.

"You need to know what the other side knows, or else you could be blindsided," says Larry Wight, a solo litigator in Roswell, Ga.

For the past several years, Wight has been engaged in hand-to-hand combat with General Motors trying to force production and explanation of black-box data from a 1997 GMC Chevrolet Cavalier that was involved in a fatal accident.

In April 2000, under an order from the Georgia Supreme Court, the automaker finally produced some 40,000 pages of raw, coded numeric data downloaded from the car's data recorders. (See "Black Box Ruling Could Transform Auto Crash Litigation," 2000 LWUSA 487, Search Words for LWUSA Archives: "Black Box" and McArdle.)

Ever since then, however, Wight and his team have been struggling to get an explanation of what it all means in plain English – so far, without much luck.

He's been diligently deposing GM engineers and independent experts, but laments, "You can't get a straight answer out of any of them."

### The Defense Strategy

That kind of stonewalling has succeeded in cooling the initial burst of interest in the black box as a litigation tool.

For example, just over a year ago, litigator Lawrence Friedman of Boca Raton, Fla., told a room full of seasoned trial attorneys about the promise of this technology at ATLA's annual meeting. Yet despite keeping an eye on the field, he hasn't heard of anything much happening since then.

Likewise for John Rupp, a Chicago defense lawyer and former co-chair of the DRI's Auto Products Specialty Litigation Group. Although he predicts the technolo-

Such wide interest in the subject encouraged Flournoy – who hails from a five-lawyer firm in Marietta, Ga. – to dig deeper into the black-box issue, and today he has become something of an information clearinghouse on the subject.

"Lawyers want to use this data as a litigation tool, and I think it needs to be a litigation tool. But in the average car-wreck case, it's going undiscovered," he says.

Here's why, according to Flournoy: When an automaker is sued in an accident case, their on-site investigator will very often download black-box information for in-house analysis. If the information is favorable to the company, it's used as a stick to beat off attacks by the plaintiff.

If the information is unfavorable, it's simply not mentioned – most plaintiffs' lawyers don't even know the black-box data exists, so they never specifically ask for it. So far the plaintiffs' bar's awareness of black-box technology hasn't reached the critical mass needed to create an information-exchange network.

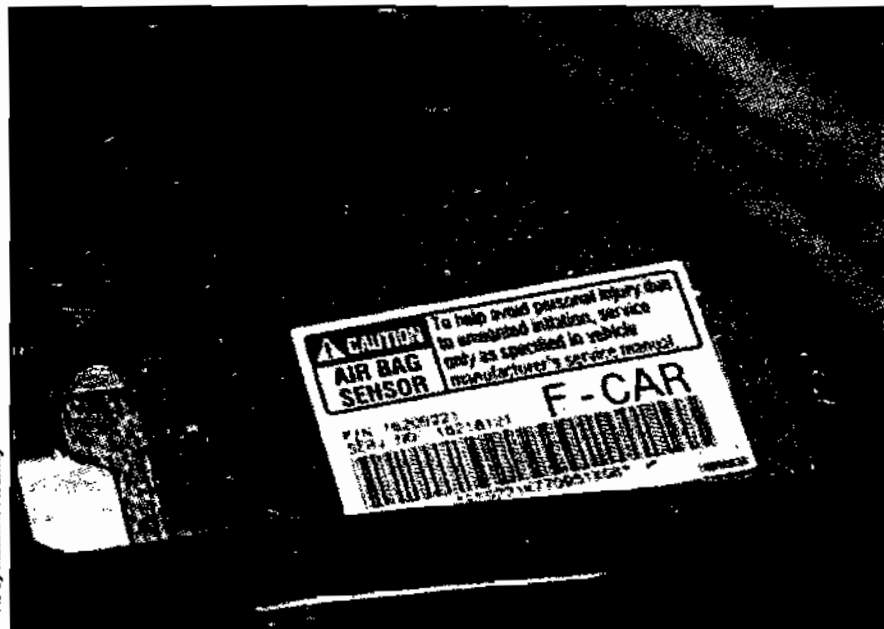
And even when plaintiffs' attorneys do know about black-box data, and try to get hold of it, Flournoy says, they get the sort of tooth-and-nail fight that has occurred in the Georgia case.

Even in those cases where access is obtained, satisfaction is hardly guaranteed. Despite sifting through thousands of pages of mathematical printouts, lawyers say there is little chance of finding any "smoking gun" evidence that will jump out and shift the balance of the case.

In fact, Wight says the courtroom value of the black-box information he has been able to interpret thus far is negligible.

"The data recorder in this vehicle was a fairly primitive thing," he explains. "It hasn't shown us much of anything – just that the brakes were applied, the seatbelts were fastened, and the airbag deployed, all of which we already knew by more conventional methods."

Photo by Matthew Flournoy



But Wight is willing to fight on. First, because much of the data he has obtained remains to be interpreted; and second, to clear the way for future cases, in which a black box might be the key to success – because, by all accounts, black boxes are getting more sophisticated all the time.

"I'd do it all over again any time," he says. "The potential is just too great to ignore."

### Change on the Horizon

The industry secrecy that surrounds black boxes and their contents is a source of great frustration to Flournoy.

"They [automakers] want to make it as difficult as possible to get this information," he says. "They want it to be accessible only to themselves."

But change may be on the horizon, as the technology needed to access this information slowly trickles into the public domain. Some of this knowledge comes from the popular media:

#### • July 27, 1999, *The New York Times*

The *New York Times* published one of the first major features on the black-box phenomenon, introducing millions of readers to the subject for the first time.

In passing, the article referenced a Massachusetts State Police initiative that proposed analyzing black box data from cars involved in fatal crashes and comparing the results with those reached by traditional reconstruction methods.

Popular fears of "Big Brother" – i.e., "Next thing you know, the cops will be able to plug into my black box to prove I've been speeding!" – and industry resistance quickly torpedoed the idea.

The officer in charge of the project told *Lawyers Weekly USA* that the idea had been tabled indefinitely.

#### • February 18, 2001, *Dale Earnhardt crash*

In the wake of race car driver Dale Earnhardt's fatal accident during the Daytona

See BLACK BOX, page B8

## BLACK BOX

from page B7

500 earlier this year, NASCAR announced it would require the installation of black boxes in all race cars.

"We are committing to the installation of crash-data recorders by the beginning of next season," NASCAR President Mike Helton said at a press conference in August.

As a result, thousands of sports fans – who might have missed the *New York Times* piece and its spin-offs in other publications – learned of the existence of automotive black-box technology for the first time.

• Aug. 28, 2001, *The Wall Street Journal*

A new company called AirIQ announced that it will be installing black boxes in rental car fleets nationwide to ensure that renters stick to their contracted itinerary and obey traffic laws. It already has contracts with Hertz, Budget, Avis and most other major players.

"Privacy advocates are alarmed," noted the *Wall Street Journal*, in an article on the front page of its "Marketplace" section. The article was titled, "Big Brother Knows You're Speeding."

As a result, public awareness of the technology rose still higher.

But for lawyers, the most important "trickle-down" is happening outside the headlines.

For example, Vetronix Corporation in Santa Barbara, Calif., offers a Crash Data Retrieval (CDR) System that is licensed by GM and will download information from



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many of that manufacturer's black boxes (<http://www.vetronix.com/diagnostics/cdr/>).

The system costs around \$2,500, and is promoted mainly to the insurance industry. Its price and limited application (i.e., certain GM models only) places it outside the "reasonable expense" range of most attorneys, according to Flournoy.

Flournoy is angry that software is needed in the first place to decode information that he believes should be readily available to both sides.

"Why should consumers or their lawyers have to pay \$2,500 to decode information that shouldn't be coded in the first place?" he says. "It should be just as freely and eas-

ily available as the speedometer and odometer readings."

Some accident reconstruction consultants – notably DJS Associates of Abington, Pa. – will actually do the download and interpretation as part of their reconstruction package. But again, first lawyers have to win access to the data, which can be a long and expensive fight.

Another sticking point: It's extremely difficult for non-engineers to understand the complex issues surrounding automotive data recorders and their contents. How is a lawyer supposed to fight for information he or she can neither read nor fully comprehend, even with a decoder?

Fortunately, however, that sort of techni-

cal information is also seeping into the public arena.

If you have a strong interest in the subject – and perhaps a knack for mathematics – you might want to tackle a comprehensive new book called *"Investigation and Interpretation of Black Box Data in Automobiles"* (American Society for Testing & Materials; ISBN: 0803120915, \$75) by William Rosenbluth, chief engineer of Automotive Systems Analysis of Reston, Va.

It's very technical since the book is primarily directed at professional engineers. But the extensive background information and detailed appendices would make an enlightening read for any automobile litigator who wants an in-depth tour of the technology.

Still, Flournoy says, much more needs to be done before black-box technology becomes fully public knowledge – and it's the automakers who have to do it.

"Why should we have to hire someone to download and translate black-box data, or buy a \$2,500 computer?" he says. "The owner of the vehicle deserves full access."

Until that happens, however, black-box technology as a litigation tool remains in limbo – waiting for that perfect combination of facts, plaintiffs and lawyers that will finally bring it into the spotlight.

"In any accident case where you need expert reconstruction, you need the black-box data," says Flournoy. "But unless the case is big enough to justify the time and expense of accessing it, the data will almost always remain untapped and undecoded." **LWUSA**

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