

CL-10213868-1166

2007 DEC 27 AM 10:58  
2007 OCT 17 A 10:46

Bowling Green, Florida

RE: Sensing Diagnostic Module (SDM) / Event Data Recorder (EDR)—(Black Box)

To whom it may concern,

My family and I have been proud, pleased, and faithfully loyal customers of GM for the past seventy-five (75) years. This is unfortunately no longer true, since we discovered that the GM Corporation betrayed our trust and privacy interests by secretly placing an electronic recording device in their vehicles without telling us anything about it. They call it a Sensing Diagnostic Module (SDM), or Event Data Recorder (EDR). It records information such as estimated speed before impact, if and when brakes were applied, if seatbelts were on, engine rpms, and other forensic information in the event of an airbag deployment.

The Power Control Module (PCM) calculates information such as speed, rpm, and Throttle body percent, based on the stock factory built specifications, and this information is supplied via the Class 2 data link to the Event Data Recorder (EDR)/ Sensing Diagnostic Module (SDM) to record vehicle information. What General Motors fails to inform it's consumers is that the accuracy of this equipment will be affected if the owner of the vehicle makes any modifications to the vehicle such as a change in tire size or a change of the final drive axle ratio from the factory specifications. In my case (and possibly in other cases), these changes were made and this fact was never introduced into court who exclusively, along with the jury, relied on the PCM's flawed data.

ET  
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CB

Just placing such a privacy infringing recording device inside our cars without telling us about it was bad enough, but then GM Corp. sold the SDM's deciphering code to an independently owned company (Vetronix), that created and marketed an "SDM crash data retrieval systems program" which has made this data/information available to anyone for a price. This exacerbates the secreted SDM "black box" recorder's potential harmfulness into a terribly unacceptable betrayal of GM Corp. customer's loyalty, trust, and privacy interests. Originally intended as a safety device, the SDM has henceforth taken on a completely different purpose, meaning, and potentially dangerous end. It represents a substantial risk and liability that we buyers were never warned of or informed about, such as, the information in this device can and will be used against the owner in a court of law. The SDM devices have now become an unknown silent threat, a secret and unwanted ever-present electronic cop.

When GM sold the SDM recording code to Vetronix they in turn produced and marketed a software package that made all the SDM data available to law enforcement, insurance companies, and anyone claiming to be an expert accident reconstructionist. This has effectively placed a cop, a prosecutor, an insurance claims adjuster, and a hostile witness against the vehicle owner inside every GM vehicle that has an airbag deployment system. GM has violated the trust and privacy interests and rights of every GM product owner, as well as the truth in sales and lending laws for those who financed their vehicles from GM Corp.

Selling the SDM's code to Vetronix (or anyone else) was a very foolish business move, tantamount to biting off the very hand that has fed them so well over the years. This may be the stupidest public relations/marketing move by any company this century. It's definitely GM's. My family, friends, employees and I all feel betrayed by GM Corp., and will never buy their prosecution and insurance company friendly products again. My friends, entire family and I are currently in

the process of selling and trading all our GM vehicles. We will be purchasing new vehicles that do not have an EDRs/SDMs (snitch box recorders) in them , nor an airbag deployment system that does anything other than deploy the airbags. I've never driven anything else and have always bought GMC and Chevy products for my personal and business needs, but no longer because I've had enough. GM Corp. has sold out the very people who helped make it great. Selling the SDM code has hurt some very good people and put virtually every one of it's customers at an extreme risk, without any prior notice. This selling of the SDM code to Vetronix has resulted in families being literally torn apart, both financially and emotionally destroyed, due to the adverse legal ramifications of the data retrieval system being made available to anyone who pays the [REDACTED] for the software. They should be ashamed. Their employees and shareholders will feel betrayed also as we formerly, loyal customers, abandon GM's corporate ship.

We pay for these "Big-Brother-Equipped" vehicles. Law enforcement does not make our car payments, yet we essentially pay their salaries to be in the front seat with us during an accident! We pay for these cars and trucks with these life saving features such as airbag deployment systems. We did not, and would not knowingly and willingly pay for a privacy violating, self-incriminating, recording device to be thrown into the package. What did GM's corporate geniuses believe the public would think and feel when they, or a loved one, friend or employee ends up cheated out of insurance coverage, sued or criminally prosecuted and incarcerated because they sold the SDM code to some independent software company who in turn, made our personal private data available to anyone with [REDACTED] to buy the data retrieval system program? Think about this advertisement:

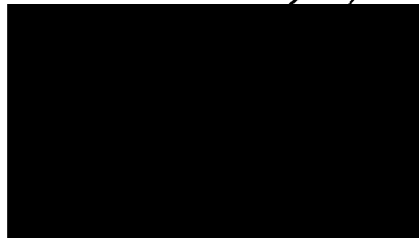
*"The air bag saved my life, and the SDM/EDR data retrieved from the wreck put me in prison for the rest of that life while helping make sure that my family was penniless after the lawsuit. Buy GM! They are very concerned about their customers."*

What an endorsement! GM Corp. puts your safety first, while putting your privacy and security last. Surely, all auto buyers want their own security to come first along with that safety. All that GM's competitors need to do is inform the public at large that they do not have to risk everything by continuing to own and operate a GM product that contains a secret recording device which has landed some people in prison and others in financial ruin. I'm sure that rival automobile manufacturers will see the marketing value in this advertising theme. Especially when the EDR is not needed for air bag deployment.

If there is any further information or questions regarding the SDM/EDR, please feel free to contact my classification Officer, Mrs. S. Hash, at (863) 767-4500 to request a legal phone call with me. Be sure to advise her of the date and time that you would like to conduct the interview. In the alternative, you can contact me at the address above.

I thank you in advance for your cooperation in this matter.

Sincerely,

A large black rectangular redaction box covers the signature area. A horizontal line extends from the right side of the box.

cc: File/EM

## CDR File Information

|                                        |                                                                               |
|----------------------------------------|-------------------------------------------------------------------------------|
| Vehicle Identification Number          | 0G4K00000X0000000                                                             |
| Investigator                           | Vetronix Corp.                                                                |
| Case Number                            | Sample                                                                        |
| Investigation Date                     | February 18, 2000                                                             |
| Crash Date                             | None                                                                          |
| Filename                               | SAMPLE.CDR                                                                    |
| Saved on                               | 2/18/00 7:18:19 AM                                                            |
| Data check information                 | 2B6B3B3D                                                                      |
| Collected with CDR version             | Crash Data Retrieval Tool 1.00                                                |
| Collecting program verification number | 7BA00593                                                                      |
| Reported with CDR version              | Crash Data Retrieval Tool 2.00                                                |
| Reporting program verification number  | A31D1C76                                                                      |
| Interface information                  | Block number: 00<br>Interface version: 06<br>Date: 12-21-99<br>Checksum: 9E00 |
| Event(s) recovered                     | Deployment<br>Non-Deployment                                                  |

## \* SDM Data Limitations

### SDM Recorded Crash Events:

There are two types of SDM recorded crash events. The first is the Non-Deployment Event. A Non-Deployment Event is an event severe enough to "wake up" the sensing algorithm but not severe enough to deploy the air bag(s). It contains Pre-Crash and Crash data. The SDM can store up to one Non-Deployment Event. This event can be overwritten by an event that has a greater SDM recorded vehicle forward velocity change. This event will be cleared by the SDM after the ignition has been cycled 250 times.

The second type of SDM recorded crash event is the Deployment Event. It also contains Pre-Crash and Crash data. Deployment events can not be overwritten or cleared from the SDM. Once the SDM has deployed the air bag, the SDM must be replaced.

The data in the non-deployment file will be locked after a deployment, if the non-deployment occurred within 5 seconds before the deployment or a deployment level event occurs within 5 seconds after the deployment.

### SDM Data Limitations:

-SDM Recorded Vehicle Forward Velocity Change is one of the measures used to make air bag deployment decisions. SDM Recorded Vehicle Forward Velocity Change reflects the change in forward velocity that the sensing system experienced during the recorded portion of the event. This data should be examined in conjunction with other available physical evidence from the vehicle and scene when assessing occupant or vehicle forward velocity change. The SDM records the first 300 milliseconds of Vehicle Forward Velocity Change after Algorithm Enable. The maximum value that can be recorded for Vehicle Forward Velocity Change is 56 MPH.

-SDM Recorded Vehicle Speed accuracy can be affected if the vehicle has had the tire size or the final drive axle ratio changed from the factory build specifications.

-Brake Switch Circuit Status indicates the status of the brake switch circuit.

-Pre-Crash Electronic Data Validity Check Status indicates "Data Invalid" if the SDM does not receive a valid message for any of the four Pre-Crash data parameters (Vehicle Speed, Engine Speed, Percent Throttle, and Brake Switch Circuit Status).

-Driver's Belt Switch Circuit Status indicates the status of the driver's seat belt switch circuit.

-The Time between Non-Deployment and Deployment Events is displayed in seconds. If the time between the two events is greater than five seconds, "N/A" is displayed in place of the time.

-If power to the SDM is lost during a crash event, all or part of the crash record may not be recorded.

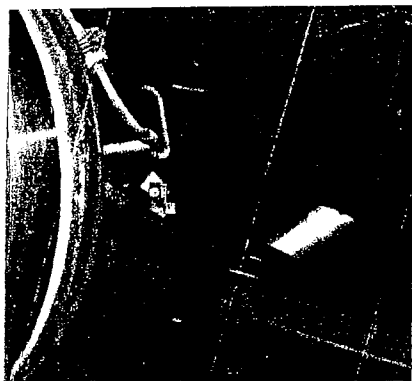
### SDM Data Source:

All SDM recorded data is measured, calculated, and stored internally, except for the following:

-Vehicle Speed, Engine Speed, and Percent Throttle data are transmitted once a second by the Powertrain Control Module (PCM) via the Class 2 data link to the SDM.

-Brake Switch Circuit Status data is transmitted once a second by either the ABS module or the PCM, via the Class 2 data link, to the SDM. Depending on vehicle option content, the Brake Switch Circuit Status data may not be available.

-The Driver's Belt Switch Circuit is wired directly to the SDM.



**15** A new development from Belltech was used in the Drop Shop's rig. This particular notch was already welded in and set up when our team of technicians arrived. The Belltech weld-in Monster Notch provides the greatest clearance without cutting open your bed. Of course, for the non-welding, Belltech still offers its bolt-in C-notch that works just as well. In addition to the notch, the Drop Shop used Belltech's flip kit and removed all but one leaf from the springs.



**16** With the removal of all but one leaf out back, the bed would have very little carrying capacity. The idea is that the leaf will support the weight of the pickup, and the airbags will compensate for any load placed in the bed — a leveling system of sorts. This 'bag kit is also new from Belltech and complements its existing line of helper airbags.



**17** A necessity in changing tire and wheel combos is re-programming the stock computer. Since the Speedo is computer-controlled it will have to be adjusted for any difference in overall wheel diameter. In addition to the necessary Speedo adjustment, Hypertech's Power Programmer allows adjustments in shift points, thermostat, timing, and speed governor.

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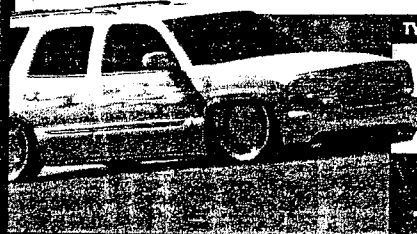


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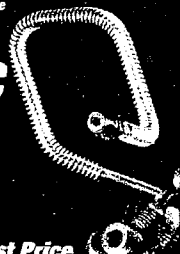


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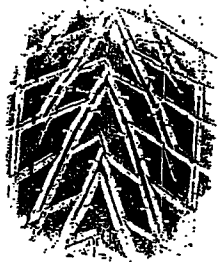
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# Certificate of Birth

Province of Quebec



|                                                                                                                                                                               |  |                                                  |                                |                                                                                                        |                          |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------|--------------------------------|--------------------------------------------------------------------------------------------------------|--------------------------|--|
| 1. Vehicle Name<br>(Last) Pontiac (First) SLP (Middle) Firehawk                                                                                                               |  |                                                  | 2. Date of Birth<br>02/26/2002 |                                                                                                        | 3. Year of Birth<br>2002 |  |
| 4. Race (exterior color)<br>Silver                                                                                                                                            |  | 5. SLP Birth #:<br>0761                          |                                | 6. Place of Birth<br>SLP Assembly Plant                                                                |                          |  |
| 7. Gender<br>Firebird                                                                                                                                                         |  | 8. Weight<br>3439 lbs.                           |                                | 9. Length<br>193.5"                                                                                    |                          |  |
| 11. Footprint<br>                                                                           |  | 12. Delivered By<br>LaSalle Plant Employees      |                                | 10. File Number, VIN<br>2G2FV22G222                                                                    |                          |  |
| 13. Birthmark<br>                                                                           |  | 12A. Mother<br>SLP Engineering                   |                                | 12B. Father<br>Ed Hamburger                                                                            |                          |  |
|                                                                                                                                                                               |  | 14. Adoption Agency<br>SHEEHAN PONTIAC-GMC, INC. |                                | 12C. Adopted By<br> |                          |  |
|                                                                                                                                                                               |  | 14A. City, State<br>LIGHTHOUSE POINT, FL         |                                |                                                                                                        |                          |  |
| 15. Original Installed Options:<br>Base 345 Alterations, Spoiler, 5-Spoke Chrome Wheels, Bilstein Suspension, Auburn Differential, Floor Mats, Deck Mat, Portfolio, Car Cover |  |                                                  |                                |                                                                                                        |                          |  |

This Certifies that the above is a true and accurate copy of the facts recorded on the birth certificate of the vehicle named herein as filed with SLP Engineering, Inc.

In attendance or witness thereof:

Ed Hamburger, President, SLP Engineering

Terry Maxwell, President, SLP Canada



Search Keyword

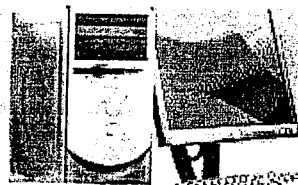
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## Vehicle's Black Box Holds Key To Crash

By JO-ANN JOHNSTON [jfjohnston@tampatrib.com](mailto:jfjohnston@tampatrib.com)

Published: May 21, 2003

Millions of drivers ride with an invisible observer in their cars that they know nothing about, even though its observations could be used for or against them in court.

The witness isn't human, but a South Florida vehicular homicide case last week proved it can be a strong voice in the courtroom. Its use in such cases also raises questions about privacy.

The black box, a monitoring device in airbag systems, records the driver's actions when a crash triggers the airbag. The box stores data about the vehicle's speed, brake usage and seat belt use in the five seconds before a crash.

On Friday, based partly on the testimony of his silent passenger, Edwin Matos was convicted in Broward County on charges of manslaughter and vehicular homicide. He could get 30 years in prison when he is sentenced in June.

In August, Matos was driving his 2002 Pontiac Grand Am Firehawk in Pembroke Pines when it crashed into another vehicle, killing two teenagers. Matos testified he was driving about 20 mph over the speed limit of 30 mph. But the black-box data showed Matos was racing at more than 100 mph.

Michael Horowitz, the assistant state attorney in Broward who prosecuted the case, said the data helped convict Matos. "It's objective. It's like having a video of how this crash occurred."



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Matos' attorney said his client had tinkered with his car in ways that could have affected the data and that the jury should not have heard about the box, the South Florida Sun-Sentinel reported.

"It helps to assign liability, or just show what happened. It can work for you, or against you, depending on what you've been doing," said Jason Alexander, a spokesman for Vetronix Corp., a California company that makes the equipment used to retrieve and read the data from black boxes.

And there's no turning back the trend of bringing black boxes into the world of justice, Horowitz predicted.

"I think that now that this information is more available, it's going to be seen more and more in traffic homicide investigations and courtrooms."

### Why They Were Invented

The idea of using black boxes as a law enforcement tool has come up only recently, even though the boxes have been installed on many General Motors cars since the 1990s and some Ford Motor Co. vehicles since 2001.

The boxes were installed in vehicles to ensure airbags were deploying correctly, not to monitor drivers.

But investigators found this glimpse into the seconds before a crash could be used as valuable evidence.

Law enforcement officials say black-box data are more reliable in many ways than witness accounts or speed estimates based on dents or skid marks, which anti-lock brakes don't leave.

"It does give us some good data," said Capt. Ken Howes of the Florida Highway Patrol. The patrol has the equipment to read black-box data and primarily uses it in traffic homicide cases. The Pinellas County Sheriff's Office has a retrieval system, but the Hillsborough County Sheriff's Office and the Tampa Police Department do not.

In traffic-homicide cases, the car, with the black-box data inside, is considered evidence, experts said.

But in the Matos case, Horowitz had to get court permission to use the black-box data as evidence. And investigators had to get a search warrant to retrieve the data, Horowitz said. The local police did not have a black-box reader and had to have an accident specialist read the data, he said.

Law enforcement agencies represent the biggest market for the black-box retrieval systems made by Vetronix, said Alexander, the spokesman. But consultants analyzing accidents for lawyers also have been customers. The systems cost about \$2,500; Vetronix is the only company with the software code from the auto makers.

### Usage Versus Privacy

As the technology is tapped and new potential uses are explored, questions of privacy have surfaced. Does using the information infringe on the vehicle owner's privacy? If so, when?

For instance, the insurance industry could use the information to protect itself and other consumers from paying fraudulent accident claims.

The insurance industry hasn't taken a position on the black boxes, a spokeswoman for the Insurance Information Institute said, citing unresolved privacy questions.

FR

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\* See ad for details



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Answering those questions will take on more urgency, if, as expected, more car makers install airbags equipped with the boxes.

Broader use of the recorders or the technology is a concern for the Electronic Privacy Information Center. The center, in public comments this year, said it hopes the National Highway Traffic Safety Administration doesn't widely use the black-box data without "strong privacy safeguards ... to protect the interests of drivers." The federal agency sets and enforces vehicle safety standards.

Some argue that not using available crash data could be a waste. One black-box advocate is Richard Martinez, a physician and former NHTSA administrator.

Martinez wants to see a database developed that would collect black-box data from crashes. Engineers could compile the data and look for links between driving conditions and injuries, which could lead to improvements in auto-safety systems, he said. His company, Atlanta-based Safety Intelligence Systems Corp., is working on such a database with other companies.

"Let's not forget, car accidents are the leading cause of death for children, teenagers, young adults and people in the workplace," Martinez said. Before now, the data available for researchers have "been too little, too late, too expensive and too wrong."

LB:

LB: LOADED WITH BLACK BOX

LB: General Motors: 1994-2003

General Motors: 1994-2003 Ford: 2001-03

Isuzu: 2000-03

Go to *TBO.com* for a complete list of cars with black boxes and information about Vetronix Corp.

Watch WFLA, News Channel 8, at 6 p.m. today for Stacie Schaible's report on black boxes in cars.

Information from The Associated Press and the South Florida Sun-Sentinel was used in this report. Reporter Jo-Ann Johnston can be reached at (813) 259-7804.

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Continued  
①

Big Brother on board  
By: Christopher Jensen  
The Sydney Morning Herald  
Monday June 16 2003

**Few owners know it, but many cars sold in Australia and around the world are equipped with "black boxes". And, as a US court case has just shown, the contents can be dynamite.**

When Edwin Matos, 47, killed two girls in a car crash, he didn't know his own car would become a witness for the prosecution.

Like millions of motorists around the world, Matos had no idea his vehicle contained an electronic data box recording what he did just before the crash. But the information will almost certainly help send him to prison.

Matos was driving a 2002 Pontiac Trans Am in a 30mph (48kmh) suburban area near Fort Lauderdale, Florida. The two teenage girls pulled out of a driveway into his path - and were killed instantly.

His lawyer argued he was driving at 60mph or just under 100kmh. The prosecutor said 98mph (158kmh). But the Pontiac's electronic data recorder showed his speed five seconds before the crash was 114mph (184kmh).

He was convicted of two counts of manslaughter and two counts of vehicular homicide and will be sentenced today. He faces 22 to 30 years in prison.

The cigarette-sized box that helped jail Matos is part of a car's computer systems, the simplest of which control the airbag.

But more advanced systems, such as those in many General Motors vehicles, record the speed of the vehicle, whether the driver was accelerating or braking, and whether the seat belts were buckled.

Most new cars in Australia can evaluate and store data on several aspects of the car's behaviour and how it's being driven. The availability of such information has excited or perturbed a wide range of groups, for sometimes contradictory reasons.

Over the next few years, the issue of electronic data recorders (EDRs) has the potential to become one of the trickiest and most controversial in the automotive industry.

Safety researchers in Australia and in the US see EDRs as an excellent source of detailed information about crashes, helping them to make vehicles safer.

For insurance companies, they are a means of determining who is at fault in an accident and, eventually, assessing risk on the basis of an individual's everyday driving style.

In the courts -- in the US at least -- prosecutors see them as additional tools in determining the guilt or innocence of those in serious accidents involving criminal charges.

Privacy groups deride EDRs as electronic snoops and a severe threat to privacy.

And car makers hope to determine, for example, whether an engine "just blew up while cruising" as

Continued

(2)

claimed, or whether it was being caned at high revs with every warning light glowing.

The devices have been used to control airbags and record how well they function since the bags were introduced in the US in the late 1980s. However, in the late '90s, General Motors took the lead and began collecting information, steadily putting advanced recorders on more of its vehicles, said Jim Schell, a GM spokesman.

In each owner's manual, he said, the section covering airbags included extensive details under the heading "crash sensor and diagnostic module".

By 1999, new GM vehicles in the US were programmed to record about five seconds of pre-crash information. According to the transport watchdog, the National Highway Traffic Safety Administration, that included whether the driver was accelerating or braking and speed of the vehicle.

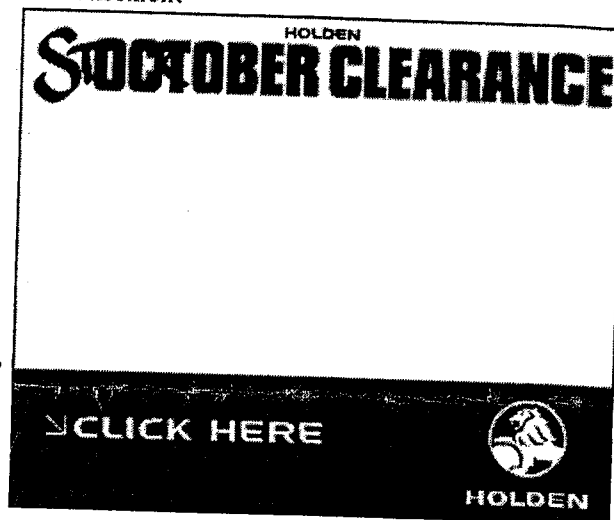
"The idea was to learn how to better protect motorists," advertisement said Schell.

After serious crashes -- and with the permission of the vehicle owner -- GM collected the information.

Ford and Chrysler have not been as quick to increase data collection through the airbag-controlling EDRs, in part due to concerns about consumer resentment.

They're waiting to see what happens to General Motors, said Philip Haseltine, president of the industry lobby group, Automotive Coalition for Traffic Safety.

"We don't want our vehicle owners thinking that their manufacturer is conspiring against them," said Rick Ruth, Ford's manager of design analysis.



advertisement

So far, said Haseltine, there appears to be little public backlash against GM -- but that could be because relatively few people know about the devices.

Nearly two-thirds of 38,000 Americans surveyed by the Insurance Research Council were not aware such devices were fitted to their vehicles.

In the Florida case, Matos's lawyer, Robert Stanziale, challenged the accuracy of the recorders in several areas and argued against their worth as a new unproven technology.

But the judge dismissed that argument in light of studies -- by the US traffic safety watchdog, its Canadian counterpart, Transport Canada, and other researchers -- that concur on the recorders providing significant and reasonably accurate information.

There is "a need to use caution", warned one Transport Canada study. "In certain situations, the stored data may not correspond to the [events] in the vehicle."

Car makers say the data in EDRs belong to the owner or person who leased the vehicle and they will not download it without permission. But that doesn't mean others can't get it. In the Matos case, a judge

Continued  
(3)

issued a search warrant.

Florida prosecutor Michael Horowitz said the recorder was extremely helpful: "It is a great tool to be used in any traffic homicide investigation."

He said other information was needed, such as evidence from crash reconstruction experts. The EDR captured objective evidence of what happened just before the crash -- which could be used by either side in court.

Criminal court cases involving EDRs have been rare in the US. This is expected to change -- like them or not, they will be more common as airbag systems become yet more sophisticated and "fly-by-wire" electronic controls are introduced.

"Not only can EDR information help make cars safer, but it can help determine what really happened in an accident," said lobbyist Sean McManamy of the American Insurance Association. "As far as the insurance industry is concerned, that information should be available to the companies."

Some Australian companies want legislation to cover the use of recorders and access to data. They told *Drive* they are concerned about the implications for privacy, civil liberty, warranties and informed consent.

They argue, for example, that insurance companies, police, lawyers and courts could take the recorder against an owner's wishes and use the information against the driver -- who might then sue the manufacturer.

The Electronic Privacy Information Centre, a US public-interest group, also wants legislation to keep Big Brother out of the car.

## **Black boxes in Australia**

### **Mercedes-Benz:**

"All Mercedes-Benz models sold in Australia contain black box recorders," says spokesman Toni Andreevski. "The system is activated when an airbag has been triggered and records the last two seconds of information before impact."

### **BMW Australia:**

"It is theoretically possible for us to do it here, but there are privacy and insurance implications which must be considered carefully," says the company's John Kaninghinis. "With our ConnectDrive system it would also be possible for this information to be sent via satellite to a base station, where the information could be stored on a rolling basis so that in the event of a crash the last five or 10 seconds of data could be stored in addition to emergency services being alerted."

### **Audi:**

"All Audi cars sold in Australia have a black box style crash data recorder [but] Audi Australia does not have the equipment required to access the information," says spokeswoman Anna Burgdorf. "The recorder must be sent to Germany before the information can be retrieved. The airbag control unit records the [deceleration or acceleration rates] and lateral forces affecting the car at the point of airbag activation."

### **Saab:**

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Spokesman Paul Ellis said Saab is trialling a "crash memory" system in Sweden and the US; there are no plans for Australia at this stage. It records vehicle speed, sideways motion, brake force and which airbags were deployed. "The information collected is used exclusively for research and development on crash safety. It is a part of Saab's 'real line safety' program. Computer simulations and crash tests in a lab only tell you certain things." All customers were made aware of the system before purchasing the car, and none had refused to have it fitted so far.

**Hold on:**

"We are thinking about it," says engineering head Tony Hyde, "but we're not doing it at the moment and the ECU (electronic control unit) we're using couldn't record the sort of data we're talking about -- throttle position, braking, engine speeds and so on. There are social implications which need consideration."

-- **Bob Jennings and Tim Colquhoun**

**Eliminate the guesswork**

The onboard computers in many, if not most, cars in Australia can capture data on the way the vehicle is driven. At this stage, only a few imported models record speed, throttle position and braking in the seconds before a crash, but the companies are not releasing or necessarily examining the information.

Robert Bosch (Australia) supplies a "body computer" whose primary tasks include "evaluation and storage of vehicle operating data". It says Australian car makers are not using programs to record driver behaviour related to crashes.

Most makers argue that "black box" recorders are valuable tools, enabling them to collect and analyse accurate "real world" accident data to help design safer cars.

Professor Max Cameron of the Monash University Accident Research Centre said no information from "black boxes" was available to researchers here.

"We would dearly love this information, which would give us such data as impact velocity. We spend a lot of time trying to estimate these things."

Car computers retained some information, mainly from the deployment of airbags, "but we're talking nanoseconds, rather than three- or five-second periods."

-- **Bob Jennings**