In this country, there seems to be a lot of controversy regarding "privacy" of data contained in event data recorders (EDRs). In years past, many vehicles stored crash data in the airbag control module (ACM) while others stored crash data in the powertrain control module (PCM), but current regulations require that the crash data be stored in the ACM. For vehicles operated on public roads, streets, and highways, it has been my opinion that drivers should have no expectation of privacy, any more than they would have an expectation of privacy if they lost control of their car because they were driving on a wet road with bald tires or couldn't stop because they had faulty brakes. In the present public fleet of cars and light trucks, there is a high percentage of them equipped with EDR capability in their ACMs. It has seemed to me that the only persons who are concerned with "privacy" are those who are guilty of some outrageously irresponsible activity, like driving 90 mph in a 25 mph residential zone. (Some have driven even faster, with fatal results to hapless local people backing out of their driveways.) I have written that to write this: in Canada, a criminal court judge ruled in favor of prosecutors who used data extracted from an ACM to help convict a motorist who caused two deaths by driving at a speed more than twice the posted speed limit and losing control of his vehicle. This decision was appealed to the Court of Appeal, which agreed with the criminal court's ruling. The defendant applied for leave to appeal to the Supreme Court of Canada, which dismissed that leave. There have been similar incidents in the United States, where speeds in excess of 100 mph on public streets have caused horrific crashes, where the data contained in the ACM clearly demonstrated that the speed calculations made by reconstructionists were valid and correct. Most ACMs will record details of vehicle control features for five seconds before a crash; that record could prove that the driver was alert and took evasive action when some hazard was presented. Data in an ACM can be an ally, not a foe, or it can be used to help convict a miscreant.

In 2015, the Federal government passed what is called the FAST Act. Part I, Section 24302 describes who owns crash data in a vehicle and the circumstances under which it may be imaged. In brief, that data can only be accessed by court order or with the written, electronic, or recorded audio consent of the vehicle owner or lessee.

My first awareness of Crash Data Retrieval was in late 2001 or early 2002; I took my first certification course in Crash Data Retrieval in February of 2002. Back then, it was a Vetronix product, and everything fit into a plastic case smaller than a typical briefcase, with room for more stuff. I have learned that the first release of the Vetronix CDR kit was in the year 2000. As perhaps all of you know by now, the Vetronix system was bought by Bosch, and my Bosch CDR hardware components now fill two large Pelican cases and one small one, not counting my jump boxes, the necessary notebook/laptop computer, and the tools I usually carry to take a car apart to get to the airbag control module when necessary. Who would have guessed?

To those of you who may have tried to access my Web site, I apologize. For many months, it was outdated, then it just went dark. I had been having problems with my Web site host for quite some time. I have solved those problems by moving my site to a new host. All files on the site should now be updated, and all links should be functioning properly. If any of you experience any problems with my new site, please drop me an email telling me what the problem was.

It may be old news to some of you, because Harley-Davidson has been working on this new type of engine for a while now, but the motorcycle manufacturer is planning to have "Milwaukee Eight" engines available for the 2017 model year. The engines are still the same 45-degree V-twin, four-cylinder models that they have been, but they get the Milwaukee Eight designation from the fact that each cylinder now has four valves—two intake and two exhaust. The four-valve configuration offers 50 percent more flow capacity than previous two-valve models. The four-valve heads will be offered on two engines: their 1753 cc (107 cubic inch) engine and their 1868 cc (114 cubic inch) engine. The four-valve heads will provide for a smoother, more efficient, more powerful engine which also has the advantage of reduced emissions. Win, win, win, win. It will be interesting to see how the motorcycling public receives this new engine configuration. Or will they even notice? When you went to buy a car, how many of you checked to see if the engine was overhead valve, single overhead cam, or double overhead cam configuration? How many of you care? If your engine has one or more overhead cams with a belt drive, you need to be aware of the required change interval on that belt; when it fails, the engine will immediately stop. On some cars, there will be immediate, severe, internal engine damage if the belt fails while you are driving the car.

Interestingly, the four-valve-per-cylinder configuration is common among dual-overhead-cam engines in cars. There are several advantages to building an engine with two camshafts per head: usually there are two intake and two exhaust valves per cylinder, increased power, improved efficiency, reduced emissions, and generally higher engine redlines. You wouldn't find a dual-overhead-cam engine with a 5500 or 6000 rpm redline—why waste the design and material and manufacturing expense on two cams per head if the design is that limited? For one thing, each camshaft has to be properly timed with respect to the crankshaft for proper engine operation, increasing the complexity of manufacturing and of repairing if and when necessary. But don't be fooled into thinking that dual-overhead-cam engines are the only ones capable of high rpm and high specific output—most (maybe all, but I'm not sure about that) Corvette engines have been of overhead valve configuration, where one camshaft sits in the middle of the block and controls the actions of all the engine's valves. That type of engine has been working fine in most American cars for many decades.

In an earlier but relatively recent newsletter, I had written about a new electric motorcycle by Harley-Davidson. In the October 2016 edition of Automobile magazine, there was a one-page article about electric motorcycles which listed five of them. I was shocked to read of one with a base price of $77,000—Sora by Lito. But I was equally surprised by the Lightning LS-218. The 218 designation comes from its top speed—yup, 218 mph. It has a 150 kW, (200 hp, 168 lb-ft of torque) liquid-cooled, synchronous motor with a range of 120 to 170 miles on one full charge. And the base price is $38,888—still expensive, but cheap compared to the Sora. These are apparently but a few of the offerings of electric motorcycles by various manufacturers. Do you suppose Tesla is going to build one with a built-in gyroscope (for innate stability) and self-driving? (Just a joke.)

Perhaps some of you have noticed, perhaps some have not: I have reduced the per-use hardware charge for the Bosch CDR Toolkit from $400 to $100. Even at $400 per use, I was losing money; I have decided to give clients a break in the charge in hopes that I will be more likely to be retained on more investigations. Perhaps the $400 charge for CDR access was off-putting. To someone who hasn't invested tens of thousands of dollars in hardware, software, and training, the $400.00 charge probably seemed outrageous. Just like my truck--$0.60 a mile doesn't cover the total cost, including tires, brakes, other maintenance, insurance, taxes, etc. Gasoline is relatively cheap right now, but I still lose a few cents per mile at 60 cents per mile billed. Just another cost of doing business in this environment. So, effective September 1, 2016, my usage charge for the Bosch CDR Toolkit went from $400.00 to $100.00.

I have a little tire confession, but first a little background to go with it. In October of 2001, I bought a new Oldsmobile Aurora. Among other features, it had a four-liter, fuel-injected, dual-overhead-cam, V8 engine with an alleged 250 horsepower and many state-of-the-art (for the time) features such as four-wheel-disc ABS, electronic stability control, and automatic dual-zone interior climate control. It became my favorite car. Now, fifteen years later, it still looks, runs, rides, and drives like it did when it was new; I believe the engine has more power now that I have found a ready source of 90-octane alcohol-free gasoline. The car only has 189,000 miles on it—just good and broken it. Over the years, my wife has developed a close friendship with an adult woman who is now in her 30s; young enough to be our daughter. She is an RN at Eggleston children's hospital. She works there a week and is off a week. During her off weeks, she goes to Maryland to be with her biological family. When she is working, she flies back here to be with her adoptive family (us) and lives with us. My wife very graciously lets Julie drive my Aurora when she is here—my wife has been very gracious about letting many of her friends drive my Aurora, sometimes for months at time, when they have needed a car but didn't want to pay for a rental. Between Julie's uses, I check oil and other fluids and have the Aurora serviced when needed. From time to time, I drive it to make sure the car is driving and operating properly. Recently, I drove the Aurora to Monticello to pick up my daughter at school and take her to Social Circle for an archery lesson and practice. I noticed that the car didn't handle properly in curves—the steering wheel would shudder. I knew there was something wrong with the alignment, and there also could be a tire balance issue. I drove directly to my Goodyear service center from Social Circle. We put the car on a rack and looked at all four tires. They looked perfectly normal—all looked to be in excellent condition, with perfectly even wear, but only 4/32 inch of depth remaining in each tread groove of each tire--time to get new tires. When I looked at the serial numbers, each tire was six years old! I had no idea. Time snuck up on me! An alignment check showed that caster and camber were fine but that toe-in was quite off. Good thing I test-drove the Aurora while Julie was in Maryland. Circumstances were such that it was more important to replace those tires because of age than because of wear, but 4/32 inch or less depth of tread can cause problems on a wet road.

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