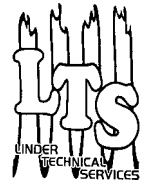


# Networking

Newsletter



## MODERN WONDERS NEVER CEASE

You know after being in the automotive service industry for over 30 years, I have seen a number of changes to the modern-day car. Sometimes too many, as some have come full circle.

One of my fondest memories was sitting on a Delco training van in 1962 (back when Delco was Delco with no overseas stuff) listening to a discussion on a new addition to the car called a Delcotron Generator (hadn't got around to the alternator word yet) that was to be introduced on the 1963 GM product line. Another of my fond memories (although many years later) was sitting in Ohio and hearing a GM instructor say that they had a new fuel injection system to be used on their latest models. He also stated that the carburetor would die out and be discontinued in just a short period of time. This one, as time has proven, would effect me the most of any of the changes ever made.

Now let's fast-forward to 2005! I just last year purchased a new Cadillac CTS for my wife, Barb, to drive after she had endured (and loved) a 1989 Buick Skylark for almost 14 years. Knowing this car was loaded with gizmos makes the car even more interesting. One of the options we have both kinda fallen in love with is the OnStar system. The telephone is hands free, works thru the stereo system and beats a cell phone to death especially while driving down the road. The directional feature we may never use but is still pretty cool as well. Lost? Just hit the blue button on the mirror and talk to a real live person who will tell you where you are and how to get somewhere else. Not a necessity, but still pretty cool.

In last weeks mail came the ultimate feature! I haven't decided if it is cool, or not cool, but thought it was a worthy topic to discuss with you, my industry friends. The latest feature from OnStar is called "OnStar Vehicle Diagnostics", a monthly email report from your car. This added feature is free to all current OnStar customers just for the asking. Once a month, or on demand if needed, you will receive in your e-mail a report form your car. This e-mail will provide the information you need to decide when to take your car in for service. The e-mail (see picture above) is easy to understand using green, yellow or red symbols next to each operating system to indicate what you need to do, if anything at all. Your monthly phone minutes for Hands Free Calling is also shown on this report. Now where does this fit in your service bays? I would say that depends on your attitude! I would suggest discussing this new feature with your customers that have OnStar and ask to be a part of their program. Use this as a tool for your business. What's wrong with a customer walking in and saying , my OnStar says it time for a service??? Look for updates in future newsletters once we have had a chance to "play" with this new feature.

—Jim Linder

**understanding your diagnostic e-mail**

Every month, you'll receive a personalized e-mail with your diagnostics report. The report is set up so you can see results at a glance.

We'll provide your OnStar account number and your vehicle's VIN and phone number for your reference.

Between e-mail reports, you can press your blue button anytime for a GM Goodwrench On Demand diagnostic check.

We'll give you the results of certain operating systems checks, with links to more information.

The e-mail will include reminders when your vehicle is due for scheduled maintenance or an oil change.

If you've purchased Hands-Free Calling minutes, we'll tell you how many minutes you have left and when they expire.

You can check your OnStar subscription status, and use the link to renew your service.

Color-coded icons make it easy for you to check results at a glance and know what, if any, action you should take.

Contact information for your dealer makes it easier for you to set up service appointments.

## Fuel Injection Update from the “Wizard”, Doug Garriott

### E85 FILL UP (OOPS!)

A recent phone call regarding the use of E85 fuel got me doing a little homework. The caller's question was: “What if a customer filled up with E85 fuel and the vehicle was not designed for E85. Could it plug up the injectors?” I told the caller that Flexible Fuel Vehicles (FFV), that would use E85, had some of the fuel system components changed to handle the Ethanol. I assumed that if a vehicle had been running on E85 and it was not designed for E85 that problems could occur. The shop ordered a set of injectors and I advised them to drain the tank and flush the system. They called back after installation to say that it fixed the problem. When I told them to identify the cores when sending the back to me, they said their customer was turning it in to the insurance company, which wanted the injectors for the claim. “DARN! I wish I could have tested those injectors”

I did continue to find out more about E85. My homework started with:

- **What is E85?** E85 is an Ethanol fuel blend, up to 85% ethanol and 15% gasoline. In most cases, the gasoline at your favorite pump has a 10% ethanol in it. E85 is primarily produced from corn and other grain products, although in the future it may be produced from other agricultural and forestry wastes or specially grown energy crops. One bushel of corn can yield about 2.6 gallons of fuel ethanol. E85 is defined by the U.S. Department of Energy as an alternative fuel.
- **Why ethanol based fuels?** It is renewable. E85 burns cleaner than gasoline because of its high oxygen content and is chemically less complex than gasoline. An 85% ethanol blend can reduce pollution by reducing the hydrocarbon and benzene emissions. There are some safety benefits with E85. Ethanol is water soluble, non-toxic and biodegradable. It contains roughly 80% less of the potential contaminants found in gasoline. Also, 100% ethanol can be ingested by human beings (moonshine) so E85 is “denatured” with gasoline or a bitter agent to prevent ingestion.
- **The price of E85.** It usually is competitively priced about the same as a low-grade gasoline. However, Ethanol has less energy content than gasoline so some fuel economy is lost.

As for Flexible Fuel Vehicles, they are nothing new. We started seeing them show up in 1995 with municipal fleets and special orders, but Henry Ford was going to use ethanol for his model T.

- **What is a FFV?** A FFV is specially designed to run on any blend up to 85% ethanol. There is only one major additional component that is included on an FFV. They are equipped with a fuel compensation sensor or variable fuel sensor that measures both the percentage of ethanol blend and the temperature of the fuel. This information is used to adjust injector on-time and ignition timing. The fuel delivery system has been modified slightly. Since alcohol is corrosive, any part that comes in contact with the fuel is usually stainless steel or has a Teflon coating.
- **Can a gasoline-only engine be damaged if E85 is used in it?** More than likely YES. Remember that FFV components are designed to handle alcohol. Retrofitting the vehicle is not recommended.
- **How do I identify a FFV?** They can be identified by the 2<sup>nd</sup>, 3<sup>rd</sup> and 8<sup>th</sup> digits of the VIN. I found a website that complete list, <http://www.ethanol.org/ACEFFVs.htm>
- **Maintenance cost?** The cost of repairs and maintenance appear to be about the same. Some manufacturers do recommend special, high lubricating oil. The concern is that unburned ethanol may pass the rings (during rich cold starts) and reduce cylinder wall lubrication.

So back to the phone call, “What if a customer filled up with E85 fuel and the vehicle was not designed for E85. Could it plug up the injectors?” Here again, I wish I could have tested the injectors. I do know we are seeing a lot of contamination in the injector lab. We are even seeing some low mileage injector failure with FFV injectors. We don't always hear the complete story of what a customer has done (filled up with E85) but I bet it happens more than what we know.

## Congratulations!

Who would have known back during our conference in September that there was a celebrity in our midst! Congratulations to Ryan Kooiman of Tolman's Auto Tech Group in Allendale, Michigan for being named the BP Amoco Ultimate Golden Mechanic! Ryan competed against many other top technicians from all across the country for this award. The national competition culminated on November 1 during Industry Week in Las Vegas where he took home a grand prize of \$25,000, one year's worth of free gas and the title of Amoco Ultimate Spokesperson. Jim and Doug were on hand at the final event in Las Vegas and said that Ryan makes a great spokesperson not only for Amoco, but for the automotive industry as a whole. Congratulations, Ryan!



## New Shipping Charges for Injector Customers

Due to the rising cost of fuel, as of Monday, December 19, 2005, our shipping and handling charges on fuel injectors will increase. We were hoping that an increase would not be necessary, but now that fuel costs continue to remain high, all major carriers are passing on a "fuel surcharge" on each delivery. Therefore, we must increase our shipping and handling fees to cover these new costs. Below is a list of the NEW charges:

Ground Service = \$10	Overnight = \$32
2nd Day = \$20	Saturday = \$15 additional
3-Day = \$12	C.O.D. = \$10

Also, some outlying areas may have an additional shipping and handling charge on large packages (General Motors CPI and CSFI units are one example).

## "Sleuth in Training"

I thought I would give you a quick update on what my daughter has been up to recently. She is now 14 months old and is walking and talking a lot (Jim says she takes after me). She loves to play with her new car. It came equipped with it's own set of tools so the spark plugs, water pump and blower can be removed. When she's not working on the engine, she pushes it around the house and makes the vroom, vroom noise.

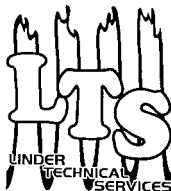
I think I will call her "Mini Sleuth"!



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## Tales from the Hotline *Switched O2 harness?*

As many of you know, Doug, Jim and I answer calls each day from technicians all over the country asking for help with driveability problems. Most of the time, we would like to think that our advice was helpful to the person on the other end of the phone, but it's rare that they call us back to tell us if we did or not.

I took a call last week from a garage that was working on a 1994 Ford Ranger w/ a V-6 engine. They had replaced the engine (I'm not sure with what kind) and now the vehicle starts, but runs very badly. The technician explained that the truck was towed to them and would barely run, so it was hard to tell if this running problem was something created by the engine installation or if it may have been present before.

Scan data revealed the fuel trim on one bank to be at the positive limit and the fuel trim on the other bank to be at the negative limit. As you can imagine, the truck would barely idle, however going down the road, the problem was barely noticeable. Of course, both O2's had been replaced along with a MAF & TPS with no change. I told them to check the routing of the O2 sensor harness, thinking that maybe a wire was rubbed through or pinched somewhere. Later that afternoon they called back to tell me that the O2 harnesses were switched. It turns out that the O2 harness for the Bank 1 sensor is long enough to reach and plug in to the Bank 2 sensor and they had switched the harnesses during the engine installation. With the engine out of the vehicle, when you lay out the harnesses, they appear to be crossed when they are in the correct position. (It's opposite of how it looks like it should be) Something to look out for if you do engine swaps or if you get a similar customer complaint on a Ranger with a relatively new engine.