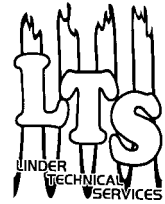


Networking

Newsletter



TECH TRAINING

Jim Linder
The Injector "Guru"

TIME IS RUNNING OUT.....Did you forget to register? We are having a **FREE** ignition workshop on Saturday, March 10 and Sunday, March 11. We ask that you register **no later than February 28.** Simply e-mail Jim at jimlinder@juno.com or call Michele at 317-487-9460. All we need is your name, daytime phone # and your e-mail address. At this point, we have registered almost 70 people and we expect that number to grow to well over 100 by the end of the month! **Here's what some of the "players" are saying about the up-coming ignition workshop:**

- "Barring any hurricanes (already had a tornado), floods, earthquakes, firestorms or any other trips to the hospital, I'll figure out a way to be there!"
Brad Petersen, Owner/Technician, Petersen Automotive in Escondido, CA
- "I will be there all the way from Northern Ontario looking forward to a good course." Steve Graham
- "The more I think about this, the more I believe some type of secondary theory class might make sense. Considering some of the TDF discussions re: secondary capacitance, inductance, magnetic coupling, etc. A very good start to what I think will be a terrific meeting!"
John Thornton, Owner/Technician, Pro-Tec Auto Service in DesPlaines, IL.
- "Count me in! There is much more to be said on this subject and a meeting of the minds could clarify a tremendous amount of misgivings." Mac Vandenbrink

Here are some of the discussions likely to pop-up during the weekend:

- "This is a very intriguing subject. I too have been doing some work with current ramping and secondary problems. My findings are pretty standard except that I do not always see a secondary malfunction on the turn on portion of the primary current waveform. I am trying to gather some more data to see if it is just on particular types of coils or if it is something else. The counter EMF should be standard in all coils but maybe the way my Fluke with a Tektronix probe displays may be where the problem lies. I will say that ALL of my findings show a problem in the turn off section of the waveform. Please keep me posted to your findings." John Forro, AST
- "I have a question, have you ever clamped BOTH the primary coil power (positive) and control (negative) wire at the same time with a current probe and looked at this tail? Since you have both wires clamped in the current probe at the same time, each will/should cancel the other and see a flat line (no current draw). If the tail is actual current instead of secondary noise why is it still present?" Miles Wada



Analysis from the Sleuth (Michele Winn)

Our case study this month is a 1996 Chevy Monte Carlo with a 3.4L engine and only 54,000 miles. This same vehicle was the focus of our May 2000 newsletter. Back in May, the service engine soon light was on with a code PO1406 for the EGR valve pintle circuit. At that time, we found the pintle was stuck due to carbon build-up. When the customer dropped off the vehicle this time, he didn't hesitate to mention his car had been in our shop less than a year ago with the **"same problem"**. We've all heard that phrase before, and I'm sure that it frustrates you as much as it does me when customers fail to understand that there are *many* reasons that the service engine soon light can come on. Unfortunately for us, the customer only knows that "the light" is back on just like it was the last time you fixed it. After further questioning, he admitted that the light comes on and stays on for several days and then goes out. Also, when the light comes on, the car runs rough, particularly at idle.



It had just snowed about 6" and was very cold outside, so my test-drive consisted of a drive around the parking lot and into the bay. The service engine soon light was not on, but I did notice the idle was a little rough. I decided to use EASE to pull codes and check history, so rolled the laptop over to the vehicle and hooked up. It had a history code PO300 (random multiple misfire). I checked freeze frame/failure records for "mileage since first failure" (MSFF) and "mileage since last failure" (MSLF). It had been 236 miles since the first failure and 123 miles since the last failure. I have now confirmed that this is an intermittent failure.



Now I need to know which cylinder(s) are affected. The PO300 is a random misfire, but does not point me to a specific cylinder. Why wasn't this PO300 accompanied by a PO301, PO302, etc. indicating which cylinder(s) had the problem? While Jim and I were discussing the problem, he got a phone call from Jeff Masterman of the Standard Motor Products Training Division. Jim relayed to Jeff the discussion we were having about the PO300 code. Apparently, Jeff had encountered a similar situation recently and found that the vehicle was not capable of displaying anything but a PO300. After consulting Alldata, I found out that Jeff was right! This vehicle can *only* display a PO300. It cannot set a specific cylinder misfire code. So, knowing that, how can I narrow my search? I pulled up misfire counters and found that cylinder #4 misfired 348 times and cylinder #6 misfired 196 times. All the other cylinders showed NO misfire. Now I know which cylinders are affected.

Looking at the engine, cylinder 4 and cylinder 6 are on the front bank closest to the driver's side of the car. My day seems to be looking up! At least it doesn't look like I'll have to take plugs out of the back bank!



Continued on Page 4

Fuel Injection Service Update from the “Wizard”



With recent core purchases and many cores that have been sent in by technicians from all across the country, it became necessary to sort through the General Motors fuel injector core cabinet. Upon doing so, I discovered many new GM injector part numbers. This brings our total to around *50 different GM fuel injectors*. These range from the 1st, 2nd and 3rd generation Bosch injectors, to the many different multec injectors, to the Siemens injectors and now into the new multec II injectors. Remember, I'm only talking about GM injectors. Let's not forget the hundreds of other Ford, Chrysler and import injectors that we also keep in stock! Car manufacturers come out with new injectors every year, so these numbers will only grow larger as each year passes. I look forward to testing these new injectors and as always, I will do my best to keep you informed of new test procedures, pattern failures, etc.



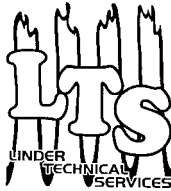
As I stated before, we have received many extra cores sent in by technicians and shop owners across the country. We would like to take this opportunity to **THANK YOU** for your help! As you know, our fuel injection business is based off the availability of good cores, so we really appreciate you taking the time to box up and send in any extra cores that you may have. To those of you who may not already know about our core credit plan, this is an easy way to earn credit toward future injector purchases. If you have any extra injector cores laying around the shop, simply box them up and mail them to the attention of Doug Garriott, the injector “wizard”. I will sort through the injectors and find out how many good core injectors you have sent, and give you credit accordingly. Good MFI and TBI injectors can bring up to \$3 each and a good CPI core (all tubes and plastic end clips in tact) will bring around \$15. I keep a log book in the fuel injection room of customer who send in extra cores. The next time you order, just mention on the phone that you have core credits and I will deduct that amount from your bill. It's that simple!

From the accounting end of the fuel injection business, I have these words from our Office Manager, Peggy Goodwin. **New Refund Policy (effective January 1, 2001)**. We have come to a point, due to the rapid growth of the injector business, that we are sending out an extreme amount of refund checks every month. This is primarily due to the fact that our customers are NOT deducting the core charge from the amount due when paying by check. Please deduct the core charge from the total amount due before paying by check. To help resolve this problem, we have decided that we will NOT issue refund checks for injector cores on a monthly basis. Instead, we will apply all credits (if applicable) to your open LTS account and they will be applied to future purchases. If at some point in the future, you build up a substantial reserve, we will send a refund check at that time. This new policy will not apply to customers that use credit cards to pay for their injector purchases. Their refunds will be handled as soon as the cores are received by LTS. This new policy also does not apply to customers that pay by COD. These customers will receive a refund check at the end of the month. These will be the only two exceptions! We are sorry if this new policy causes any inconvenience and will be glad to work with anyone on a one-to-one basis. **We greatly appreciate every single customer who has purchased injectors from LTS and helped us grow to this point! Thank you for your help in this matter.** Peggy Goodwin, Office Manager

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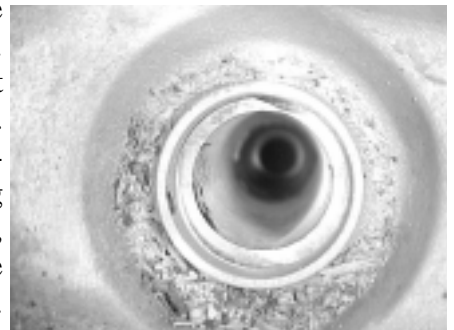


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Analysis from the Sleuth (cont.)

Sure enough, it had platinum “these will last for the life of the car” plugs. The plugs didn’t look too bad, except two of them were covered with oil. The plugs that came out of cylinders 4 and 6 had oil on them from a leaking valve cover seal. As a matter of fact, there was oil standing in the well where the plug sits down inside the head. Cylinder #2 was completely clean. So, what’s the fix? A new valve cover gasket set and a new set of plugs wouldn’t hurt! At only 54,000 miles, this will be a very expensive tune-up!



* Keep an eye on my analysis column in up-coming issues as I attempt to put fuel injection on Jim’s 1966 Chevy Pickup. I plan to document the process from start to finish, complete with pictures. I’ve always said I