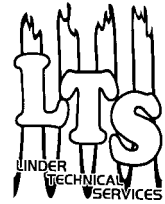


Networking

Newsletter



Jim Linder
The Injector "Guru"

"I had a shocking experience in Lindernapolis" was the theme of our weekend ignition workshop that was held on March 10 & 11. The workshop was a huge success with over 205 technicians attending from 25 different states and Canada! Technicians came from California to Delaware and from Florida to Canada!

Classes were held at Lincoln Technical Institute near downtown Indianapolis. Saturday morning began with a brief introduction from Jim Linder which then rolled into a 1-hour class on "The Standard". "The Standard" is Jim's proposed way of viewing ignition current ramps in four distinct ways and was the focus of our December 2000 newsletter that can be viewed on our website. Jim then introduced Mike Dale of Visteon Corp. who did a great class on ignition coils. From an engineer's point of view, he explained how ignition coils are constructed and how they work. Lunch was next on the agenda. We served over 200 box lunches with a sandwich, two cookies, cheese cubes or fruit, a small container of potato salad and a small container of baked beans. The group also consumed almost 40 two-liters of soft drinks! After lunch, Jim Linder did a brief class on inductors. He was followed by the shocking one himself, Mac Vandenbrink who led a class on secondary diagnosis with a current probe. Clean up hitter for the day was Jim Garrido from Saturn of Winston-Salem, NC. He did an excellent job explaining the new Saturn compression sense ignition systems to the group. His knowledge as a technician made him very popular during breaks. It seemed that someone was always "picking his brain" during every free moment!

Saturday night was the cookout at our shop on Gasoline Alley. Ever wonder how much it takes to feed over 200 people? Here's a start: 250 Ribeye steaks, 125 Brats, 25 lbs. Shrimp, 12 Gallons of Beans (specially made by Patty Green, see page 4 for recipe), 270 Assorted cookies and a lot of ice! The festivities wound down around 10pm and the last person was out by 11pm. All in all, a very well-behaved group!

Sunday morning was once again started with Jim Linder and an overview of the GM Cassette Ignition System. John Thornton was the final speaker for the weekend and brought the house down with his presentation on diagnosing cars with primary current waveforms.

We owe many thanks to the staff at Lincoln Technical Institute who offered their facility to us and set up a classroom for 200 people complete with two projectors, two giant screens and two TV's. They were on hand all weekend to make sure things were going smoothly and to help us with anything we needed. We also owe a big thank you to the MANY extra helpers that pitched in during the weekend. Several wives and girlfriends of the attendees were always willing to do whatever was needed to help things run smoothly. Also, thanks to several of the technicians who pitched in during various times to help set up, un-load trucks, etc.

*If you would like to see some of the pictures from the weekend or if you would like the most current information available on our upcoming events, log on to our website at www.lindertech.com Next year's workshop will be held on September 13, 14 & 15, 2002 and will be combined with our annual LTS Conference. The workshop has already been titled "I had a fuel-ish thought in Lindernapolis" and will focus on fuel injection.



Analysis from the “Sleuth”, Michele Winn



Well, as promised, this month will be a continuation of the March issue dealing with the TBI conversion on Jim’s 1966 Chevy Truck.

Day One:

The truck was once again taken to Dave’s Muffler to have an O2 sensor insert welded into the exhaust pipe. We believe that this will be a good location. We don’t want the O2 to be in a location that allows it to cool down below its operating temperature band (600 degrees F).

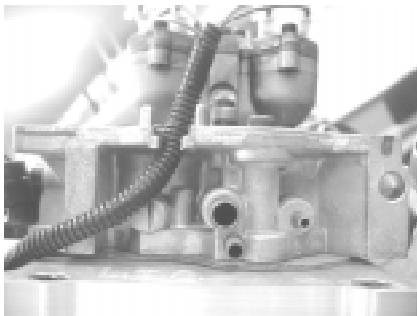


Day Two:

Lay out parts on a work bench (TBI, intake, wiring harness, sensors, distributor, coil, fuel pump, etc.) and see what issues we need to deal with before we start any assembly/disassembly. This engine uses a point-type distributor. We have elected to replace it with a newer style small GM electronic unit. The two-barrel carburetor will be replaced with a factory reconditioned 350 Throttle Body Unit, complete with a pair of reconditioned 350 injectors. We will use a frame-mounted high-pressure fuel pump, which will pump 30-40GPH of fuel at a maximum pressure of 70-95 psi.

We are now faced with several problems that must be addressed.

1. We need to find out which port on the throttle body unit is the vacuum feed for the MAP sensor.



After consulting a vacuum routing diagram, we found that the large vacuum port will be for the PCV and the smaller port located between the two fuel lines will be for the MAP sensor. The remaining two vacuum ports will not be used. OK, that problem is solved.....on to the next!

2. We have a new ECM and harness (purchased from Larry’s Electric), but the ECM did not come with a PROM or Cal Pack. So, we need to find an application for this particular ECM (part # 1227747) so we can order the correct PROM and Cal Pack. Jim consulted the OTC Prom I.D. Manual (part 10893, Nov. 1996) and found that ECM part #1227747 fits a 1990 Chevrolet Truck with either a 5.0L (VIN H) or a 5.7L (VIN K).

Analysis from the “Sleuth”, Michele Winn (cont.)

The decision was made to order both PROMs. We will install the 5.7L PROM first. If we have an overly rich condition, we can switch to the 5.0L PROM. Unfortunately, the local parts store did not have the PROMs in stock and had to order them from out-of-state. We should receive them by the end of the week. The Cal Pack should have been sent with the ECM, so Jim made another call to Larry’s Electric and they are shipping us the correct Cal Pack.

3. A KS (Knock Sensor), an ECT (Engine Coolant Temperature) and a MAP (Manifold Absolute Pressure) sensor also need to be ordered. Now that we know the vehicle application for the ECM we will be using, we will order the sensors to fit the same vehicle (1990 Chevy Truck).



4. There are a few ignition wiring details that need to be looked at. The harness we purchased already has a 4-wire plug for the distributor that fits our distributor perfectly. However, we need to know how to wire the four wires coming off the coil.

We consulted the GM Throttle Body Injection Manual #SD-214-A and quickly found a wiring diagram. We will discuss this particular wiring situation later in this article when we actually begin to assemble.

Looks like we will be ready for a full day tomorrow!

Day Three:

It’s time to begin disassembly.

Disconnect the battery.

Drained coolant from the radiator and removed the upper radiator hose.

Removed the heater hoses

Removed the throttle linkage cable from the carburetor along with the spring.

Loosened alternator and removed alternator belt.

Removed three bolts holding alternator bracket to the intake.

Removed the two bolts holding the coil to the intake and laid the coil aside, making sure to mark the “hot” wires going to the coil.

Before I removed the spark plug wires from the distributor cap, I spent a few extra minutes and marked them to make the assembly process much faster. I could have left all of the wires attached to the distributor cap, but I thought it might be in my way and we will be changing the cap anyway.

Removed the distributor cap and made a mental note where the rotor was pointing.

Removed the distributor hold down bolt and pulled the distributor out of the engine. I made sure to cover the distributor hole with a shop rag so nothing would be accidentally knocked down into the engine.

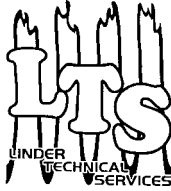
Now the top of the engine looks very bare! Looks like I’m making progress!

The TBI project will be continued next month.....

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Calico Beans from the Kitchen of Patty Green

Ingredients:

1/2 lb. fresh ground beef
1/2 lb. bacon (chopped-bite sized)
1 Onion (chopped)
1 Can (16 oz) butter beans (drained, but not dry)
1 Can (16 oz) kidney beans (drained, but not dry)
1 Can (16 oz) great northern beans (drained, but not dry)
2 tsp. White vinegar
1/2 cup catsup
1 cup light brown sugar

Directions:

—In a skillet, combine the ground beef, bacon & onion. Brown until the beef is crumbly and the bacon is done but not crispy. Drain well.
—Place the meat mixture in a large oven-safe baking dish or pot, add the remaining ingredients and stir well.
—Cover and bake in a 350 degree oven for approx. 1 1/2 hours (stirring occasionally) or until hot all the way through.
—Serves 4-6 (as a side dish)

Note: If you like HOT STUFF.....add a little (or a lot) of “Bubba’s Hot Rod Fuel”....but be careful of higher than normal emissions! ENJOY!!