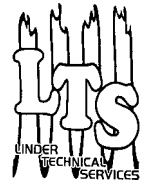


Networking

Newsletter



Guru-3.....What a weekend!

Our first week-long Guru school was held back in December of 1997. Since then, there have been a total of 243 students attend the week-long Guru school here at our Gasoline Alley facility. Those 243 students have come from 35 different states plus Bermuda, Ecuador, Canada and St. Lucia. The largest number of students have come from: Indiana (26), Ohio (20), Illinois (18) and Texas (13).



Guru-2 is a weekend class that was designed and only offered to those who had already attended the week-long Guru school. We have conducted 3 Guru-2 schools (2000, 2001 and 2003) with a total of 76 attendees. In 2002, we decided to offer another weekend of training to those who had completed Guru school and Guru-2. Guru-3 was created as a weekend of training with even more topics that hadn't been discussed in the previous schools. This year's Guru-3 class was held on Feb. 6, 7 & 8, 2004 with a total of 30 students! Combined with the 17 students who completed Guru-3 in 2002, there have now been 47 students complete Guru school and return for Guru-2 and Guru-3. These guys are always wanting to learn more and we can't say enough about the dedication they have to this industry!



In order to accommodate that many students at one time, we had to do a last-minute remodel of our classroom. Normally, during a regular week-long Guru school, it holds up to 12 students. In order to make room for 30+ techs, we had to completely re-do the layout of the room. As it turns out, we like it better than before. It gives the instructors more room in the front of the classroom, it puts the projector screen in the center of the class and gives the instructors easier use of all the dry-erase boards throughout the classroom. In addition to all the other modifications, we had to make the classroom "handicap accessible" for one of our attendees, Frank Evans, who was recovering from foot surgery. (see Frank in picture #2)



Class started Friday afternoon with a brief welcome and introduction from Jim. He spent the next 1 1/2 hours doing a condensed version of his E.S.I. (Electronic Service Information) class which brought up a lot of good discussion from the group. After a quick break, Randy Dillman took over talking about MAF testing. Lots of good real-world testing and information was given.

Continued on back page



Fuel Injection Service Update from the “Wizard”



As you know, LTS gets a lot of requests to analyze injectors to help solve driveability problems. One of the more recent requests was a set of injectors out of a 1996 Land Rover. The technician said he had a dead cylinder and thought maybe another cylinder was running very lean. They had current-ramped the fuel pump and injectors and found nothing wrong. The shop sent the injectors to us via overnight shipping for evaluation.

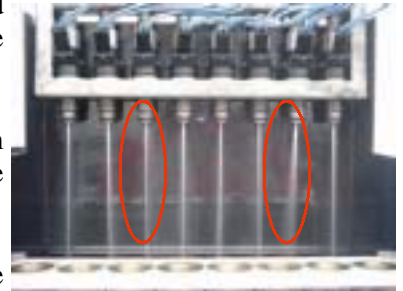
When we got the injectors on the flow bench, we first noticed that one of them was spraying off to one side and another injector seemed to be spraying a little erratic. (See picture #1)

The flow on the injectors wasn't much better. #7 had some restriction, but the #3 injector had better flow than most of the others. We blasted the paint off the injectors, rinsed them off and began the cleaning process. (See picture #2)

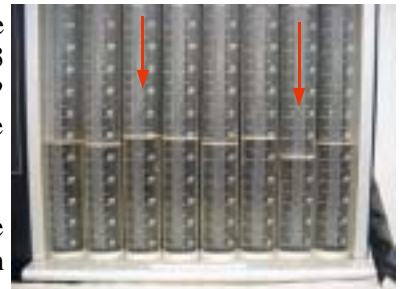
As the injectors were back-flushing, we didn't notice any real difference in the fluid coming out. The injectors cleaned for an hour and then went back on the flow bench. This time they all flowed within 2%, but the spray pattern on #3 and #7 was still distorted. What could cause this? Were they still a little dirty? We cleaned them again in hopes that if something were clogging the discharge end of the injector, it would be removed.

As we removed the injectors from the ultrasonic tank the second time, we found the problem. There was a flaw at the discharge end on the two problem injectors. The injectors used on the Land Rover are Lucas injectors and have an insert at the discharge end that directs the spray. The insert had somehow become damaged and was not directing the spray as it should. (See picture #4, 5 & 6)

WE notified the customer of what we had found and suggested they use a set of Bosch replacement injectors. They agreed and a couple of days later, the technician called to say they had one **HAPPY CUSTOMER!!!**



Picture #1



Picture #2



Picture #4

This is a good shot of what a new injector looks like. You can clearly see the insert in the tip as well as the nice round discharge hole.



Picture #5

The insert on this injector was bubbled almost like it had gotten too hot. It did not have a clear, crisp discharge hole in comparison to a new injector.



Picture #6

The insert on this injector was oblong as you can see on the bottom. This caused it to spray off to one side.

Thoughts from the “Guru”, Jim Linder

Is there really a “right “ way?

As a long time automotive instructor I have seen and heard some of the worst conversations as well as some of the best. I don't know if 30 years of instructing and working on cars has made me smarter, BUT it sure has made me wiser.

Over the last couple months I have spent a great deal of time doing classes on the road and also have spent more than my usual amount of time on the internet. One observation is there are many opinions on how things work. Sometimes these opinions are correct and other times they are incorrect. I guess its like electron theory versus conventional theory. We were taught for years (until electronic ignition) that electricity flowed from positive to negative. But I think we now know that electricity really flows from negative to positive. I used to teach the most correct flow was from surplus to shortage. WOW what a cheap shot huh?

At dinner the other night I heard a very long (*too long for me*) debate over a DTC hard fault problem and how one very bright technician had reverse engineered and made up his own test procedure to sort out the problem very quickly using a scope and a test drive. Now I feel this is a great way to do some things and I do agree that the procedure may work, BUT the problem is that the DTC already had a test procedure for the car in question written by the OEM that works like a champ. This is something very unusual in the industry but a actual specification of high and low easily accessed with common tools and little effort. Not wanting to hear a long, drawn out discussion (killing quality time with friends) I tried to stop the conversation to no avail and finally decided that the TV in my hotel room would be a calmer place to spend the evening.

Now the reason I would even bother to write this article is that all at the table were my closest industry friends. I do respect all opinions involved, and actually feel bad for leaving the conversation (a younger Jim Linder would have stayed until closing). The plane ride home was awful and I thought about this issue all the way home and now its Tuesday back at the shop.

A number of “Fuelish” thoughts:

- #####No one was incorrect in regards to how to fix the car.
- #####The inventor of the test procedure could have used the OEM methods had they known.
- #####Is there really a right way?
- #####And the answer is yes “there is a right way” to approach and fix vehicles.
- #####The right way is what ever works in your particular world.

Maybe after 30 years in the business I have finally found the secret to why they call us “Independent” repair shops.

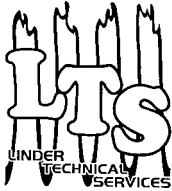


Mark your calendars now for LTS Tech Day which is coming up on August 21st. More information such as: location, times, instructors and topics will be posted in the May newsletter. Online registration will also be available in May. Hope to see you there!

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Guru-3 (Continued from front page)

Randy spent the rest of the day with the group until dinner. Dinner was served here at the LTS shop and everyone was transported back to the hotel before 8:00pm. An early night, but we knew the guys would need their sleep for the next day!

Randy started off on Saturday morning with a class on GM EVAP. Once again, lots of valuable information along with real-world fixes. After lunch, John Thornton took over and finished the day with Ford & Chrysler EVAP. We had both a Chrysler and a Ford vehicle for testing, so later in the afternoon, there was time for on-car demonstration. Once again, dinner was here at the LTS shop, but this time we made sure no one went home hungry and packed the guys full of steak, brats, potatoes, corn and shrimp, all typical items found at a Bubba-style cookout.



John spent Sunday morning with the group discussing Gas analysis and fuel trim. I think this class could have gone an entire day, but unfortunately we ended the session at noon and shortly after, everyone was either on their way to the airport, or in their cars driving home.

For those who have already completed Guru school, the good news is another Guru-2 will be held again in February 2005. More details toward the end of the year. Guru-3 is only held every other year, so sorry, there won't be another one until 2006.