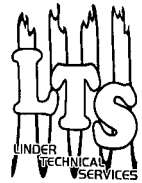


# *Networking*

*Newsletter*



## **Bonneville Salt Flats 2004:**

Imagine a place so flat you can almost see the curvature of the planet and so barren not even the simplest life forms can exist. Imagine the passing thunder of strange vehicles hurtling by on a vast dazzling white plain. This is not an alien world far from earth; it is Utah's famous Bonneville Salt Flats. The Bonneville Salt Flats is one of the most unique natural features in Utah. Stretching over 30,000 acres, the Bonneville Salt Flats is a fragile resource administered by the Bureau of Land Management.



### **Racing For Speed (some history)**

The salt flats' potential for racing was first recognized in 1896 by W.D. Rishel who was scouting a bicycle race course from New York to San Francisco. Rishel returned and convinced daredevil Teddy Tezlaff to attempt an automobile speed record on the flats. Tezlaff drove a Blitzen Benz 141.73 m.p.h. to set an unofficial record in 1914. The salt flats drew international attention in the 1930's when Utah driver Ab Jenkins lured British racer, Sir Malcolm Campbell, to compete for speed records on the salt surface. By 1949, the raceway on the Bonneville Salt Flats was the standard course for world land speed records. On this natural straightaway the 300, 400, 500, and 600 mile per hour land speed barriers were broken. In the 1960's, jet powered vehicles and names like Craig Breedlove (600.6 mph) and Art Arfons (576.55 mph) captured the imagination of millions. In 1970, Gary Gabolich's rocket car, "Blue Flame", attained a spectacular 622.4 miles per hour. Since the first speed record attempts in 1914, hundreds of records have been set and broken in a variety of automotive and motorcycle classes.

### **Ancient Lake Bonneville**

Although he never visited the salt flats, the area is named in honor of Captain B.L.E. Bonneville, whose expeditions in the 1830's proved the area was part of an ancient basin. During the last Ice Age, about 15,000 years ago, Lake Bonneville was the size of Lake Michigan. It covered one-third of present day Utah and parts of neighboring states. You can see traces of the shorelines, representing different levels of the receding lake, etched into the mountains surrounding the salt flats. The Bonneville Salt Flats and the Great Salt Lake are remnants of ancient Lake Bonneville. Wind and water combine to create the flat surface of salt. Each winter, a shallow layer of standing water floods the surface of the salt flats. During spring and summer, the water slowly evaporates while winds smooth the surface into a vast, nearly perfect flat plain. The salt surface contains potassium, magnesium lithium and sodium chloride (common table salt).

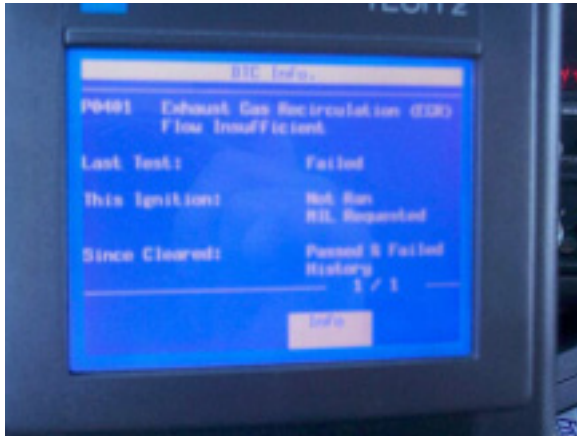
### **LTS and Bonneville:**

Last year was my first year to attend a speed event at Bonneville. The racing was very laid back and the weather was like nothing I had ever experienced. I bought this years tickets as soon as I got back from last year and will do the same again this year. Linder Fuel Injection sponsored the 130 MPH club this year and are featured on the back of the 130 club T shirt. We have now formed a group on Gasoline Alley in Indianapolis of other car guys and plan to race a 1949 Ford truck (flathead powered) next September for a record. Stay tuned for more about our recent trip. More information and how you can get your hands on a Linder Bonneville T-shirt at <http://www.saltflats.com>

—Jim Linder

## Analysis from the Guest “Sleuth”, Mike McFarland

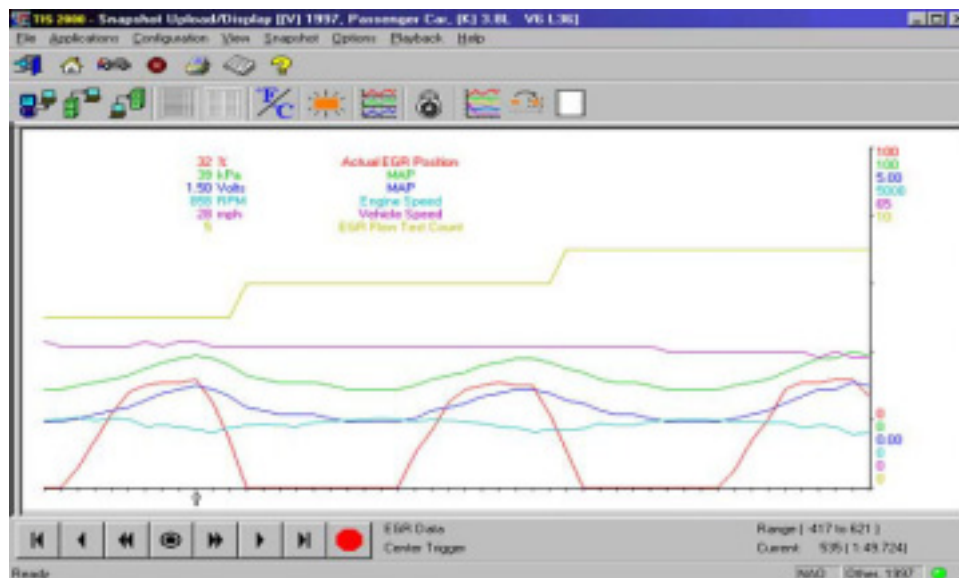
This month, our case study comes from the LTS webmaster, Mike McFarland. Mike works at Hires Auto in Ft. Wayne, Indiana. The vehicle is a 1997 3800 with vin “K”. The customer’s complaint was the MIL was on ever since the car was serviced at the local quick lube. They had taken the vehicle back to the quick lube and they scanned for codes. The customer was told they had a faulty EGR valve, so they took the car to Hires Auto to have it replaced. The service advisor at Hires explained to the customer that the vehicle should be analyzed before any parts were replaced, but the customer insisted that they just install a new EGR valve. Doing as they were instructed, they installed a new EGR valve and documented on the customer’s invoice that they were not responsible if the vehicle was not fixed.



Of course, the car returned the very next day with MIL on once again. The customer conceded that he should have let them analyze the problem before installing any parts. With the R.O. signed, the vehicle went to Mike for an analysis. Here’s what was found: P0401 was present and requested the MIL. (See picture to the left) Here’s what Alldata says about the conditions necessary to set a P0401 on this vehicle:

“The PCM tests the EGR system during deceleration by momentarily commanding the EGR valve open while monitoring the Manifold Absolute Pressure (MAP) sensor signal. When the EGR valve is opened, the PCM should see a proportional increase in MAP. If the expected increase in MAP is not seen, the PCM notes the amount of error that was detected and adjusts an internal fail counter towards a fail threshold level. When the fail counter exceeds the fail threshold level, the PCM will set DTC P0401. The number of test samples required to accomplish this may vary according to the amount of detected EGR flow.”

Mike decided to take a test drive and monitor EGR flow and MAP values on deceleration. During the test drive, he found that there was very little change in the MAP signal when EGR was applied while the vehicle was coasting. (See graph below) What could be the cause?



## Analysis from the Guest “Sleuth” (cont.)



Mike made note that the car’s problem didn’t occur until after their visit to the quick lube. Normally during an oil change, all filters and easily replaceable parts will be checked while they are changing the oil. Interestingly, the PCV valve on this engine is located under the MAP sensor. (See picture to the left) He decided to take a closer look.



Mike proceeded to remove the PCV valve and look for a problem. Upon removal of the PCV valve, he noticed that the o-ring was missing! (See picture on the left) A replacement of the generic PCV valve and a new o-ring was in order to get the MAP signal back in line. (See picture on the right) A final test drive confirmed everything was working normally. We aren’t trying to pick on quick lube shops or any other type of repair shop. We should note that the customer went back to the quick lube shop and they took care of the customer by reimbursing them for all of the repairs.

### ATTENTION GURU GRADUATES!!!

The dates for Guru-II have been changed from February 4, 5 and 6, 2005 to February 11, 12 and 13, 2005. Topics covered will be Electronic Service Information, Ford returnless fuel systems, Ford Intake Manifold Runner Controls and Variable Cam Timing, Graphical Scan Tool Interface and more. Flyers with more detailed information will be mailed by the end of November. We hope to see you there! Sorry for any inconvenience the date change may have caused.

# LINDER TECHNICAL SERVICES

4-D GASOLINE ALLEY  
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Phone: (317) 487-9460  
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## From the “Sleuth”, Michele Winn

Back in the July issue of our newsletter, instead of including a case study of my own, I included one that was sent to me by John Thornton. This month, I used a case study that was sent in by Mike McFarland, the LTS webmaster. I explained back in July that I would be taking a break from writing case studies until the end of the year, but I didn't explain “why”.

Those of you who were here in August for “Tech Day” understand why and those of you who couldn't make it, but saw the pictures on the internet may have guessed why as well. On September 28, the newest member of the LTS crew was born, Hannah Renee' Winn. She weighed 6lbs, 110z and was 21” long which is very long considering how tall I am! She already has a very strong grip, so I know she will make a great technician!

I'm hoping to return to work full-time by the first of December. Right now, I come into the shop once or twice a week for a few hours and catch up on e-mails and other things like the monthly newsletters.

For those who are wondering how Spike (the LTS shop dog) is taking this sudden change in his life, so far he's O.K. He doesn't particularly want to be too close to her, he goes into another room when she cries (hey, I wish I could do that sometimes) and he is very excited when he gets to come to work without her! Typical of any sibling, I suppose—HA!

Thanks to everyone who have sent cards and gifts. The kindness and generosity from the people in this industry has been truly overwhelming!  
—Michele Winn

