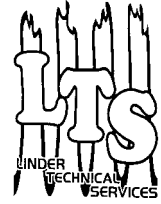


Networking

Newsletter



Injector Tips from “The Wizard”

Pattern failures? We’ve got the fix!

Over the last 4 years, we have shipped over 60,000 fuel injectors across the country, so we have become very familiar with “pattern failures”. We have done extensive work trying to find fixes for these particular problems. Below is a list of some common injector “pattern failure” problems along with the LTS fix for each one.

- **GM 2.8, 3.1 vin “T” and 3.3 up to 1993.** Many of you know that these cars come originally with black multec injectors which are prone to electrically shorting out. Our fix for these is to replace them with a Bosch DRI (Deposit Resistant Injector) for \$199.86 per set. We have had very little problem with these Bosch injectors and have shipped over 15,000 units.
- **1985-1992 5.7 vin “8” or vin “6” Corvette, Firebird, Camaro.** These vehicles also have multec injectors which have problems shorting out. We replace these with a Bosch injector for \$300 per set.
- **1987-1990 4.0 Jeep.** These vehicles may have come with a Siemens, Dekka or Bendix injector, but all have problems leaking externally where the body of the injector meets the plastic top. These are replaced with a Bosch injector which does not leak, for \$200 per set.
- **1990 4.5 vin “3” and 1991-1993 4.9 vin “B” Cadillac.** We have Bosch injectors to replace the problem multec injectors. The Bosch replacement set is available for \$250.
- **1984-1988 GM 3.8 vin “3”.** These GM cars were originally equipped with a Bosch injector that had problems leaking externally much like the Jeep injectors we talked about before. We replace them with the newer style Bosch injectors that do not have problems leaking for \$149.70 per set.
- **1992-1995 GM 4.3 vortec vin “W”.** We have printed many documents on these vehicles. The diaphragm ruptures inside the fuel pressure regulator which causes it to leak externally into the intake. **At this time, we are one of the only companies that we know of that will sell you a replacement regulator ONLY! These regulator kits are available for \$99.** The CPI units also have problems with sticking poppet nozzles. A complete reconditioned unit with flow-matched tubes and a new regulator is available for \$229.90.
- **Chrysler 3.5.** The fuel rail in these engines has problems leaking fuel. The dealer will only sell you a new fuel rail to fix this problem, but we have an o-ring kit available for \$55.
- **GMTBI.** The springs break in the fuel pressure regulators. For \$35, we will send you a repair kit with gaskets, seals, diaphragm and a new spring.

All of these replacement sets come with a lifetime warranty! Call Doug for availability.



Analysis from the “Sleuth” (Michele Winn)

I would like to start off by saying that I am very proud to be an ASE certified technician! I display the ASE patches on my uniforms, and you will never find me without my ASE ID-card in my wallet.

Recently I had the opportunity to spend a few days at ASE headquarters in Herndon, Virginia. While I was there, I learned several new things about ASE that I would like to share with you.

Why was ASE founded and what is their purpose? ASE was founded in 1972 as a *non-profit*, independent entity *dedicated to improving the quality of automotive service and repair* through *voluntary* testing and certification of automotive technicians.

How many technicians are ASE certified? As of May 2000, there are over 390,000 certified repair technicians.

Who writes the test questions? The questions are written by a group of industry professionals, NOT just someone from ASE who has read a lot of automotive literature. During a test-writing session, representatives from GM, Ford and Chrysler along with Honda, Toyota, etc. and several independents all gather in a room and review the questions. They must all agree before a question is ever seen on an actual test. This also ensures that the tests stay up-to-date with the latest industry standards.

How often are the tests reviewed/updated? Depending on which test, they are updated every 2-3 years.

And now, just like David Letterman, here are the top 10 reasons you should be ASE certified! (Along with a few personal comments from me :)



1. Certification grants you professional credentials. Since it recognizes your individual accomplishments, ASE’s certification serves as an impartial, third party endorsement of your knowledge and experience on a national basis. Every respected profession has credentials, doctors, lawyers, teachers, etc. If we want the public to view the job of being an automotive technician as a “**profession**” and not a “**trade**”, we need to have credentials and display them proudly!

2. Certification demonstrates your commitment to the automotive service and repair profession. Receiving ASE certification shows your peers, supervisors and, in turn, the general public, your commitment to your chosen career and your ability to perform to set standards. Because certification is *voluntary*, you prove your commitment to the industry when you spend time to prepare for a test and your own money to pay for them.

3. Certification enhances the profession’s image. ASE’s certification program seeks to grow, promote and develop certified professionals who can stand “out in front” as examples of excellence in the automotive service and repair industry. They are helping to change the image of today’s mechanic from the old “grease monkey” to what most of us would prefer to be called, automotive technician.

From the “Sleuth” (Continued)

At different times during the year like October (National Car Care Month) they do “media blitzes” across the country to try to reach consumers with the message that today’s cars require a knowledgeable automotive technician to service and repair faults. Maybe we should look at ourselves and ask what our dirty floors and greasy uniforms are doing for the image of this industry!

4. Certification reflects achievement. ASE certification is a reflection of personal achievement because the individual has displayed excellence in his or her field by meeting standards and requirements established by the entire automotive industry. ASE tests are changed and revised every two to three years; so to maintain your certifications for many years shows the ability to change with new technology.

5. Certification builds self-esteem. ASE certification is a step toward defining yourself beyond a job description or academic degree while gaining a sense of personal satisfaction. The tests are challenging and not everyone passes them on the first try. Only two out of five pass the first time.

6. Certification can improve career opportunities and advancement. ASE certification can give you the “edge” when being considered for a promotion or other career opportunities. ASE certification clearly identifies you as an employee who has demonstrated competency in specific technical specialty areas based on accepted industry standards.

7. Certification may provide for greater earnings potential. Many automotive professionals who have become ASE certified experience salary and wage increases based on their certification status. ASE-certified professionals are in high demand throughout North America. I have found from talking to several dealership techs both here and in other states, that in order to get top pay, you must be ASE certified!

8. Certification improves skills and knowledge. Typically, achieving ASE certification requires training, study and “keeping up” with changing technology. ASE certification showcases your individual competence by confirming proficiency and knowledge. A little “brushing up” every few years can’t hurt anyone!

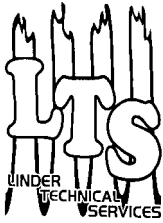
9. Certification prepares you for greater on-the-job responsibilities. Since ASE certification is a voluntary professional commitment to the industry, it is a clear indicator of your willingness to invest in your own professional development. *If you invest your time and money to become certified, why wouldn’t you proudly wear the patch and display your certifications?*

10. Certification offers greater recognition from peers. As an ASE-certified professional, you can expect increased recognition from your peers for taking that extra step in your professional development.

LINDER TECHNICAL SERVICES

4-D GASOLINE ALLEY
INDIANAPOLIS INDIANA 46222

Phone: (317) 487-9460
Fax: (317) 487-1868
Toll Free: (888) 809-FUEL (3835)
Outside of (317) are a code only



*AUTOMOTIVE
SOLUTIONS FOR
TODAYS TECHNICIANS!*

www.lindertech.com



Math From the "Guru"

NJECTOR SIZING:

Most people want to increase the output of fuel to better their engine's performance. Injector sizing can sometimes be a challenge, especially if you don't know what size of injector you are starting with. In most cases, manufacturers publish the rating of injectors in pounds of fuel per hour (lb/hr). The rate is figured with the injector held open @ 3 bars (43.5psi). An important consideration is that larger flow injectors have a higher minimum flow rating. Here is a formula to figure injector sizing if you are changing the mechanical characteristics of an engine.

$$\text{Flow Rate} = \frac{\text{HP} \times \text{BSFC}}{\# \text{ of Cyl.} \times \text{Max. Duty Cycle}}$$

- **HP** is your projected horsepower, be realistic!
- **BSFC** is Brake Specific Fuel Consumption in pounds per horsepower-hour. Calculated values are used for this, 0.4-0.8 lb. In most cases. Start on the low side for naturally aspirated engines and the high side for engines with forced induction.
- **# of cylinders** is actually the number of injectors you are using.
- **Max. Duty Cycle** is considered at 0.8 (80%). Above this, the injector may over-heat, lose it's consistency, or not work at all.

Example: 5.7Liter V-8 $\frac{240 \text{ hp} \times 0.65}{8 \text{ Cyl} \times 0.8}$

24.37 Lb/Hr. injectors required