



The Consequences of the Death of the Diesel Engine

The demise of the diesel engine is perceived imminent in part driven by pollution issues, false emission claims by the Vehicle Manufacturers (VM's) and advanced developments in Gasoline Injection Systems. The diesel engine could see access restrictions in major towns and cities around the world as early as 2020.

The consequence of all of this will have a major effect on both the vehicle Service and Repair Market as well as the Vehicle Sales Market.

The Service and Repair shops now have a tough decision. Do they invest in the expensive equipment required to test and service diesel vehicles, knowing that their market will dwindle as the cost of the repair becomes more expensive?

The question becomes; is the cost of the repair more than the vehicle is worth?

Either way the workshop owners have to make a decision on the direction of their business. Where do they deploy capital expenditure? As the vehicle market for gasoline and alternative fuels is in the ascendancy within the VM'S why invest in the diesel equipment market subject to decline through emission legislation?

The Diesel Service Market can be divided into different sectors. The **Professionals** core business is Testing, Servicing, Repairing Diesel Injectors and Fuel Pumps. The perceived **Amateurs** core business is general vehicle repairs and servicing where diesel injectors are akin to a side line to the main business.

The professionals are the recognised groups of Bosch and Delphi Diesel Workshops. The equipment used for testing servicing and repairing diesel injectors and fuel pumps within these groups has led to many hundreds of thousands of Euros of capital expenditure outlay. Major investment in equipment, staff and training, stock of service and repair items and a clean room premises to house their Diesel Service Programme can cost anything up to circa forty thousand Euros.

For the amateur, buying a test bench could cost anywhere between 15 & 30,000 Euro's. The equipment is possibly only geared to test one injector at a time. This by comparison is on a small scale delivering a time consuming service, taking longer and in many cases with the injectors not being repaired in the same manner as the well structured and capital rich in equipment professional groups.

As the Diesel arena declines the professionals are destined by commercial nature not to let their market dominance diluted by small scale operations. Professional workshops with a substantial investment will be aware of impending changes to their business. Many will find additional services to offer, some may reduce their staff, but they will maintain their business against all odds.

First notice will be struck with a price war. What the professional knows is that the amateur checking one injector at a time will take far longer to service a set of diesel injectors than themselves. By reducing the price of a service or an exchange set of injectors, they know this will push the amateur to the limit of what is cost effective, working all day to do a set of injectors at a cost and a profit that will only just cover the cost of his lease/loan repayments on the equipment the amateur is using.



The second notice will come from the supply of specific parts required to service the diesel injectors.

Whilst the market is buoyant there are a number of parts suppliers, but as the market shrinks, the manufacturers will not be keen to produce parts in bulk in fear that they will be left on the shelf, so the production will be reduced and the costs will increase.

Of course there will always be pattern parts, but fitting these parts often ends up in a failure and the work being required to be done again.

So where do the service and repair workshops invest? Gasoline Direct Injection (GDI/FSI) is here to stay as displayed by investment by Vehicle Manufacturers. The future of GDI is set fair for the next 20 years at least and with notice there will be impending problems with GDI injectors. GDI vehicles will require professionally trained engineers with equipment to carry out diagnosis and repairs on these vehicles.

What we know is that since the creation of the gasoline combustion engine, nothing has changed it still requires three essential elements, Air, Fuel and Ignition. Over the years all that has changed is the quantity, timing and delivery of these three elements which now through research and development are delivered in a more efficient manner and at unimaginable speeds to original conception.

Welcome to the world of Gasoline Injector Diagnostics.

ASNU are the market leaders in Gasoline Injector Diagnostic Testing & Servicing for more than 27 years and have distribution in over 60 countries.

GDI is not new, ASNU having been testing and servicing since 1997 and the ASNU network test and service over 600,000 various gasoline injectors per year worldwide, including GDI injectors, this have given an extensive knowledge in Testing & Servicing all types of Gasoline Direct Injectors.

No company has a greater experience on the problems with GDI injectors than ASNU. Our Injector Diagnostics Programme covers all gasoline injectors use on Cars, Bikes and Marine engines. ASNU's education and support is invaluable to the service workshops planning for the future.

The problems with GDI engines are well documented, but the cause of the problems is not. Many see the problem, but unless they find and correct ***the cause*** of the problem, it will return.

These problems are not caused by any one failure or feature. They are not due to the vehicle design or because of any design failure of the components used on the vehicle. Although the fuel does have an influence, that alone will not be the sole cause but add them to the driving conditions, traffic queues, speed humps, short stop/start journeys ***and*** the fuels used that are available worldwide and you will have the recipe for the problem. A problem that will require the attention of a professionally trained workshop with the correct equipment to enable them to correctly diagnose and correctly resolve not only the problem, but also the cause of the problem.

The vehicle engine workshops need to think long and hard about future investments and the service they provide. This sector is changing and companies need be aware of the warning signs in pending legislation on emission status and allowance Worldwide.