

# Diesel Workshop



ECU remapping specialists, BHP UK, have recently unveiled a new diesel component test and repair service for independent garages. We find out more about what is on offer.

Everyone is aware that diesel technology has advanced hugely in recent years but what few people realise is that the modern common-rail diesel system was developed as a collaboration between Fiat and Magneti Marelli. Fiat, in a time of economic difficulty, then sold the design to Bosch who developed the system further.

A modern common rail system is a simple concept. The common rail is, in fact an accumulator where fuel is stored at a very high pressure. This fuel is supplied by a high pressure fuel pump that is driven by the engine while the accumulator, in turn, supplies the diesel injector with fuel. The injectors are controlled by the ECU that dictates when the injector fires, how long it opens and how much fuel it delivers.

Although fairly basic in theory, to make the system run efficiently has taken a huge amount of development and every one of the components utilised is highly sophisticated. At the 'business end' of fuel delivery is the

diesel injector. This is a vital component that meters fuel into the engine's combustion chambers whilst spraying the diesel at a very high pressure that atomises the fuel to make combustion possible. During its serviceable life, an injector may open and close over one billion times, and all this while operating at pressures of 1800 bar.

With these sorts of demands it is inevitable that any component is going to suffer degradation and, in the case of the fuel injector, this deterioration in performance will



in turn cause the engine's performance to suffer, eventually leading to poor running or a total failure to run.

## BHP UK diesel services

With BHP UK already having acquired extensive knowledge and experience in the area of engine management and fuel systems, the company has capitalised on this by moving into the testing and repair of diesel injectors and pumps. To enable this service to be offered, a heavy investment in diesel testing equipment has been made and BHP UK are aiming to mirror the same levels of service that have proved so popular in its renowned ECU remapping offering.

A test and repair service is available on all makes of injectors and pumps and, furthermore, collection and delivery is offered as part of the process. BHP UK's own delivery vehicles will provide collection in the North West, while those further afield can be collected/delivered by national courier.

## The remapping specialists

In its earliest form ECU remapping was initially utilised as a way of extracting more power from a car's engine. Over the years the net has widened to allow 'remappers' to make other adjustments to the vehicle in order to achieve improved performance. This includes