

Earlier this year NGK introduced a range of EGR valves to its NTK Vehicle Electronics portfolio

DOING IT RIGHT

Exhaust systems are increasingly complex, so technicians need to keep up with the latest developments as legislation continues to tighten

Changing driving patterns are affecting exhaust systems, as LKQ Euro Car Parts Marketing Director Colin Cottrell observed: "Hybrid working means that shorter, less frequent car journeys are the norm for many. This can present challenges for vehicles' exhaust systems, which need to run frequently to maintain peak performance. This is especially the case for DPFs. DPFs face blockages when they don't reach a temperature that's high enough, for long enough. This state is usually achieved through motorway driving, and helps to cleanly burn off the excess soot that naturally builds up through everyday use. Without this process, a car's performance will be hampered.

"A DPF check has been part of the MOT since 2014, so this is something for garages to be aware of over the autumn, with peak demand having shifted to this time of year as a long-term consequence of the Coronavirus pandemic MOT exemption.

"For independent garages, being able to offer carbon cleaning as a core service is a great way to drive revenue,

while increasing customer satisfaction and retention. Historically, DPF blockages required specialist maintenance, but LKQ Euro Car Parts now supplies cleaning solutions that can both shorten repair times for customers and reduce the need for garages to outsource. The Carbon Clean DCS-16 DPF cleaning system allows independent repairers to carry out DPF cleaning themselves."

Guidance

Mike Schlup, MD of Kalimex, UK distributors for JLM Lubricants, observed: "Unfortunately there remains a significant lack of awareness on how to deal with diesel emissions problems and more importantly how to prevent them. We work closely with Darren Darling's independent DPF Doctor Network and can feedback that they are seeing a huge number of cases where the DPF has been destroyed by unnecessary regens and overuse of additives. Sadly, such cases are referred to a DPF Doctor as the Last Chance Saloon when they should be the first people to contact.

"What many workshops are missing out on is guidance on how to diagnose the underlying cause of DPF or diesel

emissions problems. Members of the DPF Doctor Network receive advanced training in this specialised field with ongoing resources via Darren's training portal to deal with new technical challenges and problems as they come across them. Of course, not every workshop can be a DPF specialist but it's well worth building a relationship with a local specialist such as a DPF Doctor where you can refer your customers, just as you might with electronics or automatic transmissions.

"You can also introduce them to a range of professional maintenance additives, such as JLM, which they can use on a regular basis for preventative maintenance. Our trade bestsellers include the class leading JLM DPF Cleaner, and the DPF Clean and Flush system for when the DPF is genuinely blocked. Also, JLM's DPF Regen Plus and their Emissions Reduction Treatment are excellent preventative treatments to help maintain low emissions and protect emissions components. The JLM range goes as far as offering a high-quality engine oil flush which is essential to help clean an engine with oil contaminated by particulates."

Simple

David Kaiser, Head of Research and Development at the oil and additive specialist LIQUI MOLY observed: "LIQUI MOLY offers a simple and cost-effective way to clean the clogged DPF while it is still installed. The DPF Cleaning Kit saves the customer days of waiting and high costs for the otherwise necessary removal of the DPF and shipping to a company specialising in DPF cleaning, making it an excellent customer loyalty tool for the workshop. The garage can also offer Diesel Particulate Filter Protector from LIQUI MOLY to customers who predominantly drive short distances. This additive lowers the temperature required by the filter for regeneration."

David added: "Vehicles with DPFs require low-SAPS motor oils in order not to overburden the filter with ash. If a conventional oil were to be used in a car with a DPF, the filter would clog prematurely and would have to be replaced. Filling in the wrong oil is an embarrassing mistake for any workshop and can result in expensive claims. You are on the safe side with a look at LIQUI MOLY's free oil guide. All you have to do is enter the number plate of the vehicle and you will see a list of suitable oils."

To access the LIQUI MOLY free oil guide, visit: www.liquimoly.com



Above:
Using the Diesel
Particulate Filter
Protector

Continuing increase

Commenting on the growth in demand for DPF cleaning Ivor Searle has been seeing, Commercial Director David Eszenyi said: "In terms of the current market, we are seeing a continuing increase in demand for our professional DPF cleaning service for both diesel passenger cars and LCV applications. There are a number of drivers behind this demand including the growing number of ageing Euro 6 vehicles on the road that require effective DPF cleaning to ensure their exhaust emissions are compliant. Ongoing new vehicle supply problems are also forcing both private motorists and commercial users to keep their cars and vans on the road for longer, resulting in more blocked DPFs that need to be properly cleaned."

Greater understanding

With a view to helping technicians fit the correct parts when dealing with exhaust systems, and thereby help the industry play its part in helping reduce emissions, BM Catalysts is providing free downloadable technical posters, as well as a new animated video detailing the process of how a catalytic converter works.

BM Catalysts Managing Director Toby Massey said: "BM Catalysts understands that the cataloguing of aftermarket parts can be complex, and that many consumers remain unaware of the Euro level of their vehicle. As some catalytic converters and DPFs may look physically identical to one another, the aftermarket needs to be aware of this information, as they can be very different in terms of what they are legally approved to fit. The message is loud and clear from the authorities that manufacturers, parts distributors and garages have an important role to play in ensuring the products they supply and fit are legal. Ignorance is not an excuse, and the market needs to be properly educated on areas such as Type Approval in order for it to remain compliant. Poor quality catalytic converters can still pass an MOT and mistakes can happen through the entire supply chain. Legislatively, it is very complex and this brings about exploitation of the rules and unfair competitive advantages. The regulators also need greater powers to have illegal items removed. It's a growing problem and so greater enforcement, combined with greater communication and co-operation, will help raise standards, assist the market and deter others from breaking the rules."

Toby added: "BM Catalysts is working with distributors and workshops to ensure the automotive aftermarket

Below:
Darren Darling
diagnosing
DPF issues



supply chain is better informed over Type Approval legislation and the important role they can play in its enforcement, for the benefit of the entire sector."

To access the technical posters, visit: bmcatalysts.co.uk/downloads/

EGR

On the exhaust gas recirculation front, earlier this year NGK introduced a range of EGR valves to its NTK Vehicle Electronics portfolio. NGK Spark Plugs (UK) Marketing Manager Mark Hallam observed: "The valves are equivalent to their OE counterparts with phase one of the launch in March seeing the introduction of 45 references to sit alongside the company's range of NTK Lambda sensors. Many new models will even be equipped with two EGR types, low pressure and high pressure, which means that the replacement part market for these types of valves is likely to grow, corresponding to the level of demand.

"The principal function of the EGR system is to reduce the amount of harmful nitrogen oxides (NOx) that are produced during the combustion process. The higher the oxygen (O2) content is of the charge entering the combustion chamber, the higher the burn temperature. Recirculating some of the exhaust gasses into the inlet side of the engine has the effect of reducing the amount of O2, which lowers combustion temperatures and reduces NOx emissions.

Mark added: "A valve is required so there can be a compromise between the reduction of NOx emissions and engine efficiency. Too much exhaust gas in the intake charge when the engine is cold would make combustion very unstable and the engine would not run smoothly. At high engine loads too much exhaust gas in the intake charge would cause a reduction in power output. Diesel engines can suffer with excessive black smoke. Hence the valve needs to be controlled accurately to maintain good drivability throughout all operating conditions."

For more information, visit: www.ngkntk.com/uk

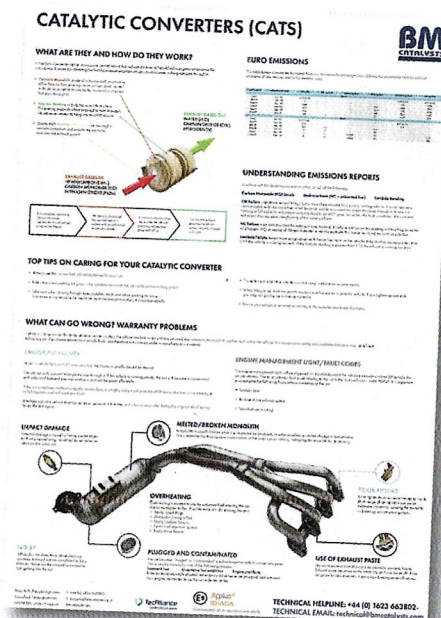
Turbocharger installation best practice

The exhaust system helps run other elements of the vehicle, including the turbo. Commenting on how to properly install a turbo, Nissens Marketing Manager Jan Zieleskiewicz observed: "Clean the area around the turbo before starting the disassembly and then carefully examine all the parts such as the intercooler, inlet/exhaust manifold, pipes, hoses, ventilation, air filter box, EGR, DPF, CAT, etc., that are in and around it for any faults, damage, leaks and impurities, and place all the screws and bolts into a dedicated box.

"Clean these parts as they are removed and if necessary, replace them. If the previous turbo breakdown was caused by seizure of the turbine/compressor wheel or foreign objects inside the turbo, the intercooler should always be replaced. However, always replace the O-rings, gaskets and hose clamps. Prime the turbo's shaft by injecting new engine oil into the turbo's oil feed before mounting the oil feed pipe and rotating it ten times. Then measure the oil pressure at the turbocharger and check the oil flow before fitting the oil return.

"Once the turbo is in place, start the engine and while it is at idle for a couple of minutes, inspect the entire system. Check that all the turbo connections are leak-proof and inspect any suspicious sounds. Ensure that there isn't too much back pressure in the exhaust system and naturally

Right:
Technical poster
available for
download from
BM Catalysis



repair any detected issues. Connect test equipment and reset the fault before taking the car out for a drive to check if it runs correctly, and with the right boost pressure."

For more information, visit the Nissens Automotive expert knowledge portal:

<https://support.nissens.com/en/material/self-learning-course-turbocharger-component-installation>

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