

# CLEANING UP WITH EXHAUSTS

Exhaust systems are an ongoing opportunity, and if you add in the DPF, there is definitely money to be made, even with EVs and hybrids around



**W**ith electric and hybrid vehicles are more mainstream every day, is it still worth thinking about exhaust systems?

Commenting on the trend, Doug Bentley, Research and Development Manager at Klarius said:

"Electrification in the automotive industry is happening. With international and environmental pressure building around the issue, and the industry beginning to

**Above:**  
Exhaust systems  
require attention

respond, it is inevitable that this will be the next paradigm shift regarding automotive powertrains. As the Research and Development manager for an aftermarket emissions component company, I'm often asked how long the market can last. Due to some recent announcements in the industry, I may be able to shed some light on that.

"Toyota has long been considered a benchmark in the automotive industry, it has been the market

leader in terms of volume for over a decade. Seminal offerings such as the 2000GT, Hilux, Landcruiser, Supra and more sit alongside the more recent and relevant hybrid Prius to illustrate a business that can offer vehicles that not only define the industry, but our attitudes to cars as a whole. So, when Toyota opens-up about its plans for an electrified future, the automotive world listens.

"In December 2017, Toyota announced that it plans to sell 5.5



million electrified vehicles annually by 2030, with 1 million of these being zero-emissions vehicles. The remaining 4.5 million will be covered by hybrid vehicles. Impressive numbers when considered in isolation, however when compared to the total production output of Toyota, a different picture presents itself.

"During the fiscal year that ended March 2017, Toyota sold around 10 million vehicles worldwide. No doubt Toyota will wish to improve on these figures by 2030; however, using 10 million as a benchmark figure still illustrates a point. Even by 2030, Toyota's optimistic predictions state that only a tenth of the vehicles it will sell annually will be fully electric. In this time period, over nine million liquid-fuel powered cars are projected to be sold by Toyota, taking into account traditional petrol, ethanol or diesel-powered vehicles and hybrids."

## Timescale

What does Doug think this highlight to manufacturers and distributors of exhausts then? "Well, for a start, these figures show that there is a clear timescale before full electric cars gain an impact over traditional powertrains in terms of sales and it's a long way off. Hybrid powertrains still require exhausts, as they blend traditional liquid fuelled engines with

## Below: Cracking the DPF dilemma

electric motors and batteries, so therefore produce emissions. This means that the exhaust is set to be widely used on new production vehicles well into the 2040s, and as average life spans vary between seven and 10 years, the aftermarket will be servicing these vehicles well into the 2050s.

"Furthermore, this prediction does not consider the many challenges and concerns surrounding a worldwide switch to electric vehicles. Infrastructure to support electric vehicles will be lagging behind for some years to come, as illustrated by the 10 new nuclear power stations that would be required to reach the



UK government's pledge to fully electrify road cars by 2040."

## Increased demand

There are other considerations: "Access to rare earth metals used in battery production is anything but assured, with many resources such as cobalt held in conflict zones, while commodities businesses must scale up operations to meet increased demand. We only have to consider VAG Group's failed 2017 tender to secure cobalt supply for the following five years to see the barriers the automotive industry must overcome. Conversely, if liquid fuel such as alcohol is manufactured on a large scale biologically, using sunlight and bacteria, it might just remain cheaper than electricity and extend the life of the combustion engine even further. Frankly at this point, who knows?"

Doug concludes: "Finally, technological limitations such as battery heat generation haven't been fully addressed, while many owners of electric vehicles are unsure how future maintenance work will be carried out and the total cost of ownership over the long-term. Ultimately it seems, for both the exhaust and liquid fuel cars in general, there is plenty more in the tank."

## Auxiliary

So there is a future for the exhaust. Good news for us, but what about diesel particulate filters? Considering the direction of travel on diesel car sales, as in downwards, is there still a market to exploit? If you consider the number of diesel vehicles sold over the last 15 years, there is definitely a big chunk of the parc still running on the fuel. This means you still need to consider diesel as part of your overall offering. The DPF offers may opportunities.

While it performs a vital function, like every system it has its own weaknesses and can go wrong. With this in mind, LIQUI MOLY says its Diesel Particulate Filter cleaner offers a great auxiliary service for workshops. This product allows workshops to provide their customers with an economical alternative to replacing clogged DPFs.

Reiner Schönfelder, Applications Engineer at LIQUI MOLY commented: "Diesel particulate filters reduce exhaust emissions. After they are filtered out, the soot particles are burned out of the filter at regular



intervals to prevent it from clogging up. However a certain exhaust gas temperature is required for such regeneration. This temperature is often not reached by cars used for short trips. The result? The particulate filter clogs up increasingly reducing engine performance.

"At the bottom line, the engine can stop operating altogether, making it necessary to install a new particulate filter. This can happen after driving as little as 12,000 miles. Normally the service life of a particulate filter is significantly greater than 60,000 miles. In addition to the mileage, the quality of the fuel also plays a role. The lower the quality, the quicker the particulate filter clogs up.

"A new filter costs several hundred pounds, making manual cleaning well worthwhile. This is why LIQUI MOLY has developed its diesel particulate filter cleaner."

### **Active**

Reiner continued: "It's use does not require removal of the particulate filter. It is only necessary to remove the pressure or temperature sensor in the exhaust system. Then the probe can be inserted through the opening and the cleaning fluid sprayed directly into the particulate filter. The active

ingredients dissolve the encrusted soot. The next step after the cleaner, is to spray in a purging agent. This fluid distributes the dissolved soot in the filter to facilitate burning it out later.

"Including the reaction time for the cleaner, the entire process requires a maximum of one-half hour before taking the car down off the lift. Then it is necessary to run the engine for a while at increased speed to activate the cleaning cycle. This burns out the dissolved soot and clears out the filter."

Cleaning is viable option that customers will embrace according to Reiner: "Workshops can make points with their customers by offering this cleaning service and helping them to avoid high costs. This underscores the workshop's competency and helps increase customer loyalty. Typical candidates for particulate filter cleaning are cars used frequently for short trips such as taxis or by 'Sunday drivers.' On such vehicles, we recommend cleaning the particulate filter at every major tune-up. Such

preventative maintenance helps keep the particulate filter from clogging up in the future."

Reiner added: "The diesel particulate filter cleaner from LIQUI MOLY is a real problem solver for professionals."

## Cleaning

Another option is full DPF cleaning. David Eszenyi, Commercial Director at Ivor Searle commented: "There's no doubt that faults related to diesel emissions systems are becoming more prevalent as the high number of diesel cars and light vans in the UK's vehicle parc for continue to age. Diesel engines are particularly prone to contamination-related issues that cause problems downstream in the exhaust system and within the DPF in particular. Left unmaintained, DPFs can easily become blocked with soot and ash deposits, which in the worst instances takes them beyond the point of regeneration.

"As a result, the market for replacement DPFs and cleaning continues to expand unabated with an



**Above: Hybrids have exhausts too**

increasing number of motorists taking their car to the garage with the DPF warning light showing in the instrument cluster. This leaves workshops and their customers with basically three options; Purchasing a costly brand new OEM unit, buying a cheaper generic aftermarket replacement with the risk of potential fitment problems, or by far the most cost-effective option, professional cleaning of the original DPF with the reassurance that the component can be easily reinstalled."

Against this backdrop, Ivor Searle offers DPF cleaning. David observed: "We've applied over 70 years of remanufacturing expertise to our fast-turnaround professional DPF cleaning service. Utilising Flash Cleaning technology, our water-based cleaning process delivers as new levels of cleanliness. The eco-friendly system removes all contamination, including PM10 particles, cerium oxide deposits and oil residues, from the DPF. Unlike chemical-based DPF cleaning processes, which only remove soot, Flash Cleaning eliminates both soot and ash deposits. This returns a DPF back to OE levels of performance at a fraction of the cost of buying a new unit.

David added: "Costing just £225+ VAT, Ivor Searle's direct to workshop DPF cleaning service includes collection and delivery, as well as the reassurance of a 12-month unlimited mileage warranty."



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Driving your journey

## The Lambda factor

NGK enhanced its NTK sensors' offering last November with the launch of 20 new wide band Lambda sensors – commonly referred to as '5-wire' Lambda sensors – to supplement its existing range of 64 NTK OE 5-wire sensors. Their introduction has significantly increased the UK range coverage – particularly for VAG models – and means that NGK now has 5-wire sensors available for almost every vehicle manufacturer who utilises this technology.

Mark Hallam, Marketing Manager, NGK Spark Plugs (UK) Ltd, said: "We have had a very positive response from our customers to the launch of our new NTK 5-wire sensors. As a company we never stand still. NTK has more than 40 years' experience in the sensor business and this has been a fantastic addition to our portfolio of Lambda sensors, exhaust gas temperature sensors (EGTS), NOx sensors and Mass Air Flow (MAF) sensors and Manifold Absolute Pressure (MAP) sensors.

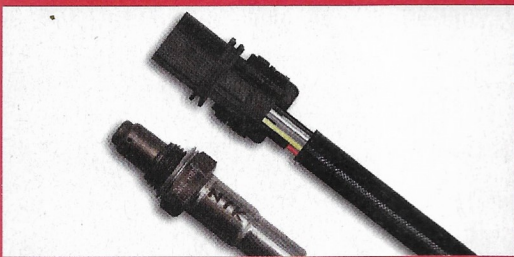
"NGK is the world's largest manufacturer of Lambda sensors under the NTK brand and, as an OE supplier to many of the world's leading vehicle manufacturers (VMs), supplies the same components to the UK automotive aftermarket.

"There are good reasons why NTK Lambda sensors are the No.1 choice of VMs around the world, they are 'similar but different'."

Mark said the experience NGK has in supplying the VMs worldwide allows it to offer exactly the right sensor for every vehicle application: "Distributors should encourage garages to always go with a bespoke OE-quality Lambda sensor and steer well clear of 'universal sensors'."

In April this year NGK also introduced a new range of premium NTK camshaft and crankshaft sensors (also known as engine speed & position sensors) to the UK.

Mark added: "The new sensors – comprising more than 200 UK-specific part numbers with excellent UK vehicle parc coverage – opens up further OE replacement opportunities for aftermarket customers. In addition to its market-leading NTK sensors portfolio, NGK Spark Plugs (UK) Ltd is also a leading supplier of OE spark plugs and glow plugs, plus ignition coils, to the independent automotive aftermarket."



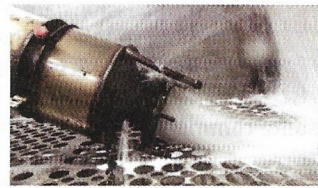
## LIQUI MOLY diesel particulate filter protection

This fuel additive from LIQUI MOLY protects DPFs. The functional life of a DPF is limited, and under some circumstances, and as the result of how a car is driven, can fall significantly below the manufacturer guidelines. One of the main causes of this is soot, the filter's arch enemy. However, LIQUI MOLY's diesel particulate filter protection helps to keep the filter clean and allows it to last longer. It also provides an additional income stream for garages. [www.liqui-moly.com](http://www.liqui-moly.com)



## DPF cleaning from Ivor Searle

Ivor Searle offers a fast-turnaround DPF cleaning service for cars and light commercial vehicles. Including collection and delivery, the direct-to-workshop service also includes a guaranteed 12-month no quibble unlimited mileage warranty. Utilising advanced Flash Cleaning technology, Ivor Searle's water-based DPF cleaning process delivers as new levels of cleanliness. The eco-friendly system removes all contamination, including PM10 particles, cerium oxide deposits and oil residues, from the DPF. Unlike chemical-based DPF cleaning processes, which only remove soot, Flash Cleaning eliminates both soot and ash deposits. This returns a DPF back to OE levels of performance at a much lower cost than purchasing a new OEM unit or risking fitment problems with a generic aftermarket replacement. [www.ivorsearle.co.uk](http://www.ivorsearle.co.uk)



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