# Filters fraud

**It makes sense to save a few bob where you can, but watch out. As far as filters are concerned, some OE-labelled products are nowhere near OE specification – and it's simply not worth the risk. Brian Tinham reports**

**Above, right and far right: a case of spot the difference**

**Below: some OE quality labelled filters have less than 50% of the right filter media**

Filters are filters are filters, right? Wrong. Well, surely those marked 'OE [matching original equipment] quality and performance' are all the same? Actually, no. Agreed, most are correctly designed and manufactured to the manufacturer's specification. However, some are just not – despite the claim on the label. And the fact is that, from the outside, it is simply impossible to tell the good from the bad.

So transport engineers and workshop managers trying to save a few bob by purchasing cheaper consumables may end up regretting their choices. Certainly, when it comes to air, oil and fuel filters, it turns out that they may well be falling foul of the old 'penny wise, but pound foolish' adage. Sadly, though, they will only find out much later, when fuel consumption and maintenance bills start inexplicably creeping up – or, worse, vehicles experience unexpected downtime or even catastrophic failure.

Why has this old chestnut resurfaced now? Because, although rumour has been rife for years, serious research on commonly available filters, recently released by OE filters giant Mann + Hummel, sheds new light on a growing scam, in some cases amounting to fraud.

Ken Read, product and marketing manager for the aftermarket business at Mann Filter (the aftermarket brand of Mann + Hummel), says the company fully understands operators' need to save money, with margins as low as they are. However, he warns buyers to be on their guard. "In the current economic situation, some motor factors feel they have to dual stock premium and basic products to keep garages' business. So, increasingly, lower-cost filters are on the shelves. They could be coming from anywhere and motor factors are not being told that these may not meet OE specification."

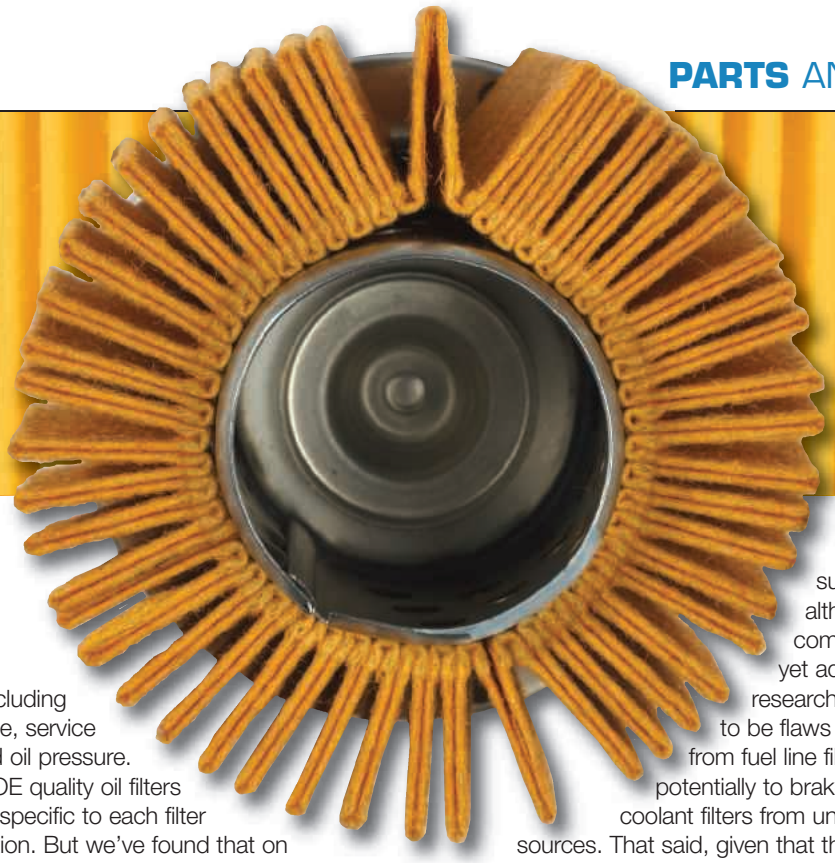
So what of the detail? Read points first to air filters, stating that, despite the main components being visible, it's difficult even for professional technicians to tell the difference between genuine OE quality and the pretenders. While refusing to reveal brand names, he cautions: "On the surface, they look much the same; even the polyurethane seals look similar. But, if you take them apart, it's immediately obvious that the filter media – which is the most critical component – may be very different."

Mann + Hummel's laboratory has, for example, found OE quality labelled filters with less than half the requisite filter media surface area. That clearly reduces their ability to trap and retain contaminants all the way to the next service. "Contaminants – whether entering the engine because the filter medium or the seal is inadequate – can damage sensors in the mass airflow mechanism that sends messages to the engine management system. And in the engine itself, you're looking at premature wear problems. The point is that they leave expensive equipment vulnerable."

### Compromised by design

What about oil filters? Again, Read indicates significant shortfalls on some apparently OE equivalent product, in terms of the filter material, length, and pleat numbers and depth, as well as the pleat supports, centre tube diameters and alignment of the end caps. "Remember, these filters are supposed to remove and retain sub-micron contaminant particles, with the capacity to last efficiently between service intervals – particularly important for low-revving, heavy-duty engines."

But problems don't stop with the basics: other defects found relate to bypass valves, anti-drain valves and even the seals. "Every oil filter needs a bypass valve, which opens when, say, an under-serviced unit threatens to restrict lubricant flow. Every

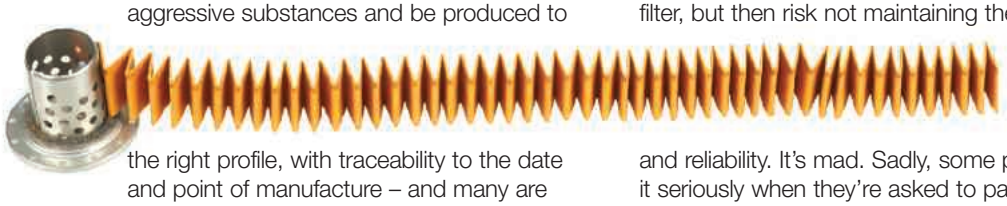


engine is different, so opening pressure is dictated by variables, including lubricant type, service intervals and oil pressure. That's why OE quality oil filters have valves specific to each filter and application. But we've found that on some it's generic – which saves cost, but then doesn't comply with the OE specification."

**Valve specifications**

What about anti-drain valves? Read reminds us that their function is both to retain lubricant in the filter when the engine is switched off (to ensure immediate oil pressure to the engine), and to provide a positive seal between the filter element and lid, so that unfiltered lubricant cannot pass. Here the issue is that some apparently OE equivalent filters have been manufactured with sub-standard rigid rubber compounds, instead of the OE approved materials. That means they can't offer the required recovery properties and temperature tolerance – potentially becoming brittle and even disintegrating. Some are also compromised, in terms of the sealing surface itself. "Anti-drain valves are situated close to the clean side of the filter, so any disintegration or migration [of rubber particles] will go straight into the oil galleries," explains Read.

It's much the same with the external filter seals, which are not only subject to high pressures and temperatures, but also compression (typically screwed onto the block or housing) and acid-contaminated oil (due to the combustion process). "These seals have to be durable, able to withstand aggressive substances and be produced to the right profile, with traceability to the date and point of manufacture – and many are not."



Read suggests that, although his company has not yet advanced the research, there are likely to be flaws with everything from fuel line filters, even potentially to brake system and coolant filters from unscrupulous sources. That said, given that the latter are specialised, the problem should be less widespread.

The bottom line, however, is very straightforward. Clearly, it can make sense to shop around where high-value components are concerned – such as body trim, mirrors, bumpers and plastic items. But, given that a genuine OE oil filter comes in at about £10 and lasts for up to around 120,000km – so six months to a year – why would you risk an engine for a saving of, say, 20% – meaning £2 or the price of a couple of Mars bars? To put that in context, an oil change alone on, for example, a 42-litre sump MAN D26 engine costs about £200.

And it's a similar story with air filters, which for that same MAN unit cost around £40, but last for a year. A 20% saving there might be £8. Compare that with the annual running costs of a truck, which are £5,000 on maintenance and £60,000 on diesel.

Look at it another way: if you don't fit the right fuel filter, you might reasonably expect a reduction in fuel efficiency over time. Suppose you end up losing half a mile per gallon: that's around 6% more fuel, meaning a near £4,000 increase in your primary costs. With the top 100 operators running at margins under 1%, no one can afford that.

As Vince Welsh, MAN's director of UK aftersales, puts it: "Some people just do not make the right decision. They might save a pound or two on a £10 filter, but then risk not maintaining their trucks properly and incurring costs, certainly in terms of mpg and reliability. It's mad. Sadly, some people only take it seriously when they're asked to pay for repairing a £25,000 engine." TE

**Above: there is a world of difference between good and bad anti-drain valve systems**