

Your shout!

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“The technology might be available to help operators meet exhaust emission targets, but who is going to pay for it?”

Investigations taking exhaust temperature profiles of different vehicles run by various operators have verified that, in city duty cycles, most vehicles will not meet the required exhaust gas temperature to regenerate and self-clean carbon build-up. This is well known by major operators and TfL using pre-Euro 4 and 5-engined vehicles.

However, when they sell a bus, the vehicle manufacturers do not know what duty cycle it will be operating and so will fit standard systems. So, is it the responsibility of the operator, the vehicle manufacturer or the preferred exhaust system manufacturer to write the specification of the exhaust emission system?

One expert explains that he was requested to investigate a case where a vehicle's emission system was completely clogged up within four months of operation from new. The duty cycle was town use only; the specification for the bus was that it had to be fitted with a DPF.

When the system was full prematurely, the operator was not happy, because the filter had to be cleaned earlier than had been indicated. This meant an unbudgeted cost and he complained to the vehicle manufacturer, which spoke with the emission system manufacturer. The unnamed manufacturer replied that, as the filter was working, there was no product fault.

Paradoxically, if this vehicle had been used on a different route with some motorway, countryside or hills, the emission system would probably have been perfectly serviceable.

Various manufacturers are offering alternative systems to those using the old cordierite filter cores, which tend to suffer from exothermic reaction. Clearly, this causes inconvenience and unwanted expense to the operators. Modern technology uses silicon carbide filter substrate, which can withstand roughly twice the temperature of cordierite and, consequently, is much less liable to suffer from this type of failure.

Another, rather more costly, option is to remove the old engine and refit it with an up-to-date Euro 5 engine and exhaust system.”

Transport Engineer's regular 'IRTE to IRTE' members' column: focusing on the issues, challenges and concerns that matter to transport engineers and fleet managers

