



There are mobile devices available that measure a spectrum of harmful exhaust gasses and Traffic officials should be trained how to use them. Says John Schnell, KZN Traffic Directorate, "emission testing should be linked to the transport industry's annual Certificate of Fitness examination, but this won't be easy to achieve because of fairly sustained industry resistance to compliance because of the costs involved."

Truck owners can do their bit. Regular servicing, ensuring the use of good quality diesel and oil, promotion of driver training and driving style, prevention of over-fuelling resulting in under-combustion and billows of smoke ...

► 65 "the motor oil industry has been producing innovative products aligned with new vehicle technology and emission control devices. New means of treating exhaust and similar emissions have had to be developed. This has led to the implementation of various after-treatment devices such as catalytic converters and particulate filters made of palladium and platinum. Unfortunately, leaded fuels and lubricants deposit heavy metals on these devices, causing clogging which renders them ineffective. Consequently, Castrol has developed a range of lubricants with lower sulphur and phosphorous content to complement the cleaner fuels strategy, thereby ensuring that emission levels are effectively reduced." He adds that with improved fuel economy comes less frequent oil change intervals, which reduces the amount of oil that needs to be disposed of.

DaimlerChrysler has developed SCR (selective catalytic reduction) technology, which converts polluting nitrogen oxides into harmless nitrogen and water vapour by adding

ammonia in the form of a carbamide solution as a reducing agent in a catalytic converter. The carbamide solution, named "AdBlue," is a non-toxic, colorless, odorless and water-soluble substance. A vehicle's AdBlue consumption when meeting the Euro 4 standard will be about six percent of the diesel fuel used. With a 100-litre tank, for example, that corresponds to a range of more than 5,000 kilometers. There are no additional maintenance costs for the SCR-specific components such as the catalytic converter, dosage control system or tank. In addition to the savings offered by SCR, the technology also has the advantage that it is not dependent on the availability of sulphur-free diesel fuel.

Pipe dreams

Exhaust emissions kill. They need to be outlawed. This means government has to really put its money where its mouth is - legislate standards and effectively enforce them. Right now, even smoke legislation is not being policed. It's a case of "in Africa, anything goes".

Do your bit

And one can sympathise with truck operators on this score. Diesel quality when used in new technology injectors is a problem, an expensive one at that. Spending money on Euro 3 truck-technology just doesn't make financial sense at this stage in South Africa, which is why Euro 2 from an emissions perspective in SA is still a pipe dream. However, truck owners can do their bit while government and the fuel companies get their act together by optimising engine combustion to minimise the production of pollutant particles from the start. Regular engine servicing is crucial, as is ensuring only good quality diesel and oil goes into it. Additives like Fuel Effect and Algae X are starting to prove themselves as combustion optimisers as reducers of toxic emissions. Driving style is also a key factor in reducing smoke emissions. Over-fuelling the engine while driving results in undercombustion and billows of smoke. Operators need to train and monitor their drivers (via whatever means necessary, be that the old beady eye, tachograph or electronic fleet management systems) to ensure optimum combustion. In short, the days of smoking rigs are seriously numbered. New truck technology and new sulphur-free diesel are working hand in hand with government to eliminate emissions. If transporters resist these initiatives, they too will be eliminated. ☐

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