

Good housekeeping



As biofuels become increasingly popular for commercial vehicles, concerns over storage are growing. John Challen looks for a tried and tested formula that guarantees quality when you need it

One of the biggest talking points at last year's IRTE conference on biofuels was the need to carefully monitor and maintain the fuels themselves. Speakers and delegates were specially keen to stress the importance of keeping a close eye on the fuel storage containers themselves. Correct storage, it transpires, can make a very big difference to prolonging the life and maintaining the quality of these alternative fuels – something that barely registered with regular diesel.

Problems resulting directly from inadequate care in the storage of biofuel include water absorption, due to the fuel being essentially hygroscopic. Water ingress and condensation on the inner tank wall lead to microbial growth that can then block filters, resulting in fuel flow and component failure, followed by potentially costly vehicle breakdowns and downtime.

"It is essential that your storage tanks and pipework are periodically checked for water ingress through components, seals and other access points," advises Trevor Mason, from PFS Fueltec, which offers a stored fuel cleaning system.

"Carrying out preventive maintenance on stored fuel, as well as fuel storage and dispensing equipment will help operators reduce costs and increase reliability of their fleets," continues Mason. "In the past, fuel storage equipment has been largely ignored and under-maintained until a problem arose. This is no longer an option; regular maintenance is paramount."

His advice: fuel tank cleaning must become a regular part of any commercial vehicle depot's general maintenance programme. It doesn't much matter whether it's carried out

manually or automatically – it just has to be done.

In fact, the equipment marketed by FPS Fueltec is manufactured by Denmark's CC Jensen (CCJ), and Brian Holden, general manager of CCJ's UK operations, sings from the same hymn book. "Clean diesel fuel is essential for an efficient and reliable engine," he agrees. "But, to achieve clean fuel, it is necessary to use purification and the key is choosing the right method."

Cutting costs with CCJ

Holden insists that his company's fuel separator and cellulose/fibrous fine filter, which has a three micron absolute rating, offer a very cost-effective method of removing and controlling microbes in biofuel. The filter separator has the capability to remove moisture down to ultra low levels, he says, and simultaneously captures particles and absorbs sludge into the filter media.

Holden also states that each of the fuel separator's filter inserts has a surface area large enough to remove 4kg of dirt before a change is required – making maintenance of the system easily manageable. Further, his systems are modular, so diesel storage facilities can be constructed economically, whether you're talking about 100 litres or 1 million.

Historically, CCJ filter separators are designed as off-line systems, drawing the biofuel from the bottom of the storage tank and returning it to the top, to ensure good circulation. "Our latest

inline system, however, can be used on fuel dispensing pumps, fitted between the pump outlet and the refuelling nozzle, so filtering the fuel before it enters your truck storage tanks," explains Holden.

Other analysis and monitoring equipment is available, one item being the XDS biodiesel analyser from Foss. This unit can check FFA (free fatty acid) and moisture content at intake, and promises an effective conversion. Foss claims that analysis of glycerides (esters formed from fatty acids) takes just a couple of minutes using the XDS. With a more traditional gas chromatography instrument, the timescale is closer to an hour.

One word of warning, though: if an automatic tank cleaning system is chosen for your existing storage tanks, and particularly if they are old, the recommendation is that the tanks be manually cleaned before the automatic process is put into operation. Failure to do so will almost certainly result in expensive premature filter changes on the new equipment. TE

