

# MACHINERY

## €500 can be money well spent

"DONALDSON Filtration Solutions are one of the biggest, yet also one of least known companies in the world."

That was the unusual opening that Niko Verhaegen, development manager with Donaldson, gave his company at a presentation on filtration and diesel quality on the premises of McHugh Components in Dublin recently.

McHugh (formerly McHugh and Kramp) are one of the leading suppliers of components for the agricultural sector in Ireland.

Niko went on to explain that the reason Donaldson aren't that well known is because they are one of the biggest suppliers of filters to original equipment manufacturers; in other words, when a farmer or contractor sees a John Deere or a New Holland branded filter on their new tractor, in fact there is a good chance that the filter was actually made by Donaldson and merely branded in green or blue colours.

"We don't mind not being well known; as long as the tractor makers want our products, that is the important thing," Niko readily admitted.

During an informative presentation, Niko gave some honest and candid views on fuel quality and supply practices in Ireland.

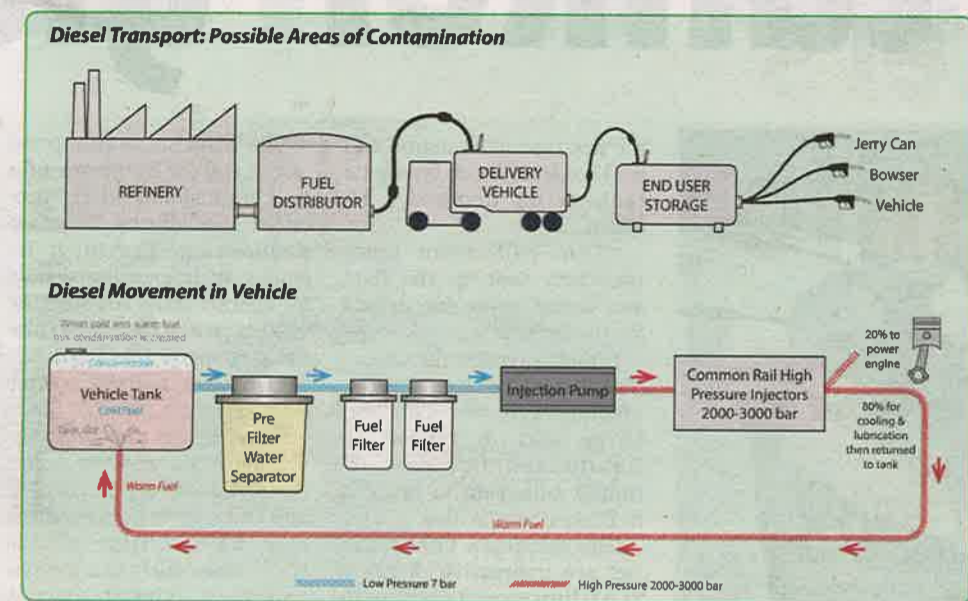
He said agriculture was a sector that Donaldson are now seeing a lot of filtration and quality problems in because modern tractors have grown much more sophisticated and sensitive to fuel quality issues.

He noted a trend he has seen in Ireland, whereby farmers are very often seen as being a 'light touch' by some oil suppliers.

"I've noticed that the oil lorry might come to the farm at the end of the day with the



Tiny particles of dust, sand, metal, glass, sludge and rust that are invisible to the human eye are just some of the money sapping foreign bodies found in diesel samples tested by Niko Verhaegen, development manager for filtration experts Donaldson.



The importance of fuel filtration is best shown in this diagram; note the various stages your diesel goes through before eventually being used in the engine.

last thousand litres sloshing around in the bottom of the lorry," he said.

"Farmers need to be extra vigilant because, like it or not, some oil suppliers view the farmer as a smaller customer because he or she might only be taking a delivery of 1,000 or 2,000 litres, compared to the much bigger customer who needs 10,000 litres a week.

"The temptation will always be there to give the less important customer the last batch of fuel, which will also be the riskiest in terms of having impurities.

"I've been on farms and actually tested the diesel for water and particulates as it is being pumped into a farmer's tank. In some cases, the results are frightening."

While he concedes he is in the business of selling filters and therefore has an obvious conflict of interest, Niko does come across as being a man who genuinely wants to help farmers improve their fuel quality.

"I always say to a farmer I will refuse to sell him my equipment if I don't think it is going to help his situation," he said.

"What's the point in me selling a farmer an inlet and outlet filter along with an air breather if the main source of the problem is that water is getting in through a hole in the tank? The true root of the problem always has to be fixed first."

Niko deftly summed up the lackadaisical attitude towards filtration that a lot of farmers exhibit today when he explained how tough a sell fuel filters can be. "At the end of the day, you're selling something that takes out something that farmers can't even see! They look at the fuel

and think, 'sure, that's clean already, it looks fine,' but unfortunately it's the tiny particles of dust, sand, metal, glass, sludge and rust that are invisible to the human eye.

"These are the particles that are doing damage to fuel injectors because, with modern high pressure common rail engines, they are coming into the injectors at colossal speeds and pressures of up to 2,000 bar. These particles will cause erosion of injectors very quickly, which in turn leads to increased fuel usage and reduced efficiency. To replace an injector you normally have to replace the others as well, so it can quickly leave the farmer with a bill of thousands."

Niko put the huge pressure new common rail engines operate under into context when he explained that they give the diesel (as well as any foreign particles found therein) enough pressure to go through concrete walls.

"It really is a huge problem for wear and tear on modern injectors because older engines operated at only one tenth of that pressure," he said. Water in diesel tanks is a widespread problem on Irish farms as well, according to Niko, who insists that the average Irish farmer's diesel tank could have as much as 5% to 15% water.

He is a proponent of using an inlet filter on the tank's cap as well as an outlet filter off the tap. The inlet filter will absorb any water in the fuel as it is being pumped from the oil lorry into the farmer's tank.

In addition, Niko advises that these filters should be backed up by a proper air breather on the tank cap that will let air in but not water.

Farmers using an outlet

filter - which is now seen as an absolute minimum for anyone serious about fuel housekeeping - will also have

to fit a pump to the farm tank. This is because gravity feed will not supply enough pressure to get through a decent outlet filter of 10 microns or 5 microns in size in realistic time.

Now, all this sounds like a lot of expense. So what might a bog standard farmer with a 2,000 litre tank which currently has no filters whatsoever and no water bung have to invest in, in order to get up to a good level of fuel housekeeping standards?

"I would say about €500 would go an awful long way," Niko said. "For that farmer who has nothing in place to protect his machinery and who has suffered large breakdown costs for fuel pumps and injectors, it really is the best value money he will spend all year.

"Filters are there to do a job and as long as they are getting clogged or filling up, rest assured that they are doing what they were de-

signed for; it's better to have a clogged filter than to have a messed up engine which is going to be exponentially more expensive to sort out.

"So for about €500, the farmer could expect to have good quality inlet and outlet filters, an air breather on the filling cap and a suitable farm-spec fuel pump."

What does Niko think about all of these biocides and additives that John Deere and other tractor makers are advising farmers - at great expense - to add to their diesel tanks?

"Nothing extra should be needed provided the farmer gets his basic filtration right. The new low sulphur diesel is of better quality than the old marked gas oil and farmers should see an improvement provided they have a decent tank that doesn't let water leak in and that filtration is recognised as being the really valuable protective step that it is."



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