

>>DO YOU KNOW ABOUT BIODIESEL AND WHAT IT MEANS FOR YOU?

With the global focus on sustainability, requirements of the fuel supply industry changed in 2019. This industry is now required to increase volumes of renewable content in fuel – collectively both diesel and petrol.

This is achieved by adding biodiesel (fatty acid methyl ester – FAME) to increase the renewable content of the fuel. The FAME content of road diesel (EN590) has been steadily increasing for more than 10 years and until 2019 was typically in the range 4-5% by volume.

Both the on-road fuel standard (EN590) and the off-road fuel standard (BS2869:A2) allow for up to 7% by volume of FAME to be added. This standard was set in 2011 and has not changed.

However, most off-road fuel had a significantly lower FAME content so the sudden increase in the FAME content in 2019 caused many problems such as fuel starvation and fuel filter clogging, which has led to equipment downtime – with many filters now needing to be replaced prematurely.

>>PROTECT YOUR INVESTMENT



>>OUR PHILOSOPHY

Whilst we don't expect to turn all our customers and end-users into fuel scientists, we want them to understand, in the simplest terms, what are the potential problems, the actual problems, the possible solutions and the overall benefits of using products that meet OEM specification.

In this respect we are happy to use a bottom-up, field-based approach – indeed, experience has shown us that this is the best way for us to learn what the real issues are and how to overcome them.

We need our products to work for you – you need to see the benefits, whether these be technical or economic. Any claims we make, therefore, will be realistic, achievable and repeatable; and are based on the science.



>>INVEST IN REGULAR MAINTENANCE



>>SIGNS OF A CLOGGED FUEL FILTER



- Trouble Starting the Engine. The most common sign of a clogged fuel filter is trouble starting the machine, since it depletes the oil supply going to the engine
- Issues Accelerating
- Frequent Idling and Sputtering
- Strong Odours
- Engine Misfires/Low Performance

>>IMITATION FUEL FILTERS AFFECT YOUR PROFITABILITY>



>>INDUSTRY BEST PRACTICES

There are many types and causes of diesel contamination, dirt, water, chemical contaminants and microbial growth are but a few. Contamination of diesel is a common cause of unplanned maintenance, poor or inconsistent machine operation and reduced fuel economy. In the worst case, mechanical breakdown can result. Fuel cleanliness, in both storage and operation, is essential practice when it comes to the long-term operation, ROI and uptime of the machine.

Industry recommended guidelines are published by regional governing bodies.

It is recommended that these guidelines are always followed >>

>> FUEL STORAGE & HANDLING

RECOMMENDED GUIDELINES

- Delivery – Check with your supplier that all deliveries meet the required level of cleanliness as defined in ISO 4406 (industry standard).
- Correct processes and procedures following delivery
 - >> Routine maintenance of storage tanks is essential.
- Any contamination in the storage tank will, in time, end up in the fuel system of the machine. Periodic cleaning of the storage tank coupled with the addition of inline filtration is advised.
 - >> Consideration of fuel storage duration should also be considered.
- A large bulk delivery may be advantageous from a purchasing perspective but if fuel is stored for prolonged periods, it can increase the possibility of storage tank issues.
- Smaller tanks, with more frequent deliveries can mitigate some risks.
- Refuelling the machine
 - >> Ideally, the machine should be fuelled directly from the main storage tank, utilising the inline filtration system and delivery system.
 - >> If this is not possible, please ensure that any fuel decanted from the main tank is only transferred to approved fuel containers.
 - >> Temporary storage containers should not be used for mixed fluids and must be kept clean and free from dirt, water ingress and microbial growths.

BEST PRACTISES TO PREVENT FUEL CONTAMINATION

- Fresh fuel: Only buy fuel from reputable sources that conform to the EN590 standard
- Eliminate outside water: Plastic fuel storage tanks are better than steel because of less chance of condensation build up and water then contaminating fuel
- Keep a full tank: Half-full tanks will “breathe”, allowing moisture and condensation into the tank.
- The tank fill area should be raised above ground and placed away from areas where rainwater and contaminants could flow in.
- Inspect vents, pumps and fill caps for damage. Replace if necessary.

Speak to your local AGCO dealer today about the range of products available to ensure your fuel dispensing equipment is of the same standard as the machines you are dispensing into to.



WHAT ARE FUEL ADDITIVES

Fuel additives are blends of one or more chemical compounds that have a specific quality enhancement functionality related to either fuel storage, fuel handling or fuel combustion. They are typically added at low volumes measured in parts per million.

Adding chemicals to fuel so to achieve a “different” or “desired” performance is a branch of the oil industry that goes back 100 years. It is not a new concept and need not be viewed with the scepticism that it is in some quarters. Only the very cheapest road fuels do not contain an additive “package” and, via the Worldwide Fuels Charter the majority of the world’s engine and vehicle manufacturers now prescribe the use of additives to ensure that their equipment has the best chance of meeting the stringent performance and emissions controls being imposed.

>>KEY BENEFITS OF FUEL ADDITIVES

- Improved fuel economy
- Reclaim contaminated fuel
- Extend fuel oil life
- Improve equipment durability
- Prevent contamination
- Reduce emissions
- Improve Bio-fuel stability
- Increase production efficiency

>>FUEL ADDITIVES OR PREMATURE REPLACEMENT OF FILTERS?

Fuel additives add minimal cost to your fuel per litre vs. the alternative:

- The price of new filters
- The cost of the downtime to your business
- The associated costs to change filters – e.g labour charge

<<AFTER ALL PREVENTION IS ALWAYS BETTER THAN A CURE>>



FUEL SAMPLING

Fuel sampling is a critical part of preventative maintenance on your machinery. Testing detects any contamination before costly damage is done.

<<ALLOWING US TO CARRY OUT ANALYSIS OF FLUIDS CAN DIAGNOSE ISSUES BEFORE THEY OCCUR – KEEPING EQUIPMENT UP AND RUNNING>>

All samples undergo visual checks by the laboratory followed by in-depth testing:

Colour & Appearance – A first check of the sample, this identifies any obvious contamination such as dirt particles or free water, indicating possible poor fuel tank maintenance.

ISO Particle Count – On fuel systems it is critical to have clean fuel as particles can block channels and affect the fuelling of the engine, potentially leading to injector or pump wear. We report to an ISO standard cleanliness code.

Water Content by Karl-Fischer – After our visual check to identify free water in the sample, we carry out this test to measure any dissolved water in the fuel. Water in fuel can lead to corroded components, reduced lubrication and damage to injectors. Ultimately the fuel performance can be affected.

Sulphur Content – Fuel regulations have changed over recent years and your machinery needs to operate with the correct fuel. We check the sulphur content to confirm if it meets the required level for Ultra-low Sulphur Diesel (ULSD).

Wear & Additive Metals by ICP – This identifies any oil contamination in the fuel and any high silicon levels from dirt contamination.

Bio Content (FAME) – Diesel fuel now contains biodiesel; our analysis confirms the amount and if it falls within the expected value.

Bacterial & Fungal Check – Any bacteria or fungus thrives in an environment of water and fuel and in doing so creates a build-up of sludge or slime, which can cause blocked filters. Our analysis detects any biological activity so you can take action to treat it before any serious issues.

Distillation & Density – With our advanced analysis we can confirm the presence of kerosene or petrol and calculate the Cetane Index if requested.



<<GET IN TOUCH NOW TO ARRANGE FOR YOUR FUEL TO BE SAMPLED>>

For further advice, support or to purchase any items contact your local dealer.



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<https://www.agcocorp.com/find-a-dealer.html>

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