



Technical Service Bulletin.

Diesel Fuel Specification Queries.

There has recently been an increase in calls to the business including service and support teams, product managers, and engineers regarding the use of more up to date fuels in Caterpillar engines which are readily available in today's marketplace.

At this point in time the most common are Biofuel, HVO or FAME fuels.

If any enquires are received, you should refer to the information in the specific Caterpillar media available in SIS 2.0 where you will find the magazines SEBU6250 and SEBU6251 Acceptable Fuels.

Caterpillar give the following advice – “We are not in a position to test all varieties of renewable or alternative fuels in the marketplace. If a renewable fuel fulfils the performance requirements in the Caterpillar Fuel Specifications and it's the latest version of EN590, or ASTM D975 or paraffinic fuel spec CNE TS 15940 which defines GTL (Gas to Liquids) HVO (Hydrotreated Vegetable Oils) or BTL (Biomass to Liquids) then this fuel, or a blend of this fuel mixed with appropriate Diesel, can be used as a direct replacement for petroleum Diesel in Caterpillar engines.

If any customers do use these later type of fuels, and expresses concerns over a change in temperament from the machine engine, or the exhaust system gives suspicious signs – such as extra re-gens etc, then they can use recommended fuel system cleaner 3436210, or if not available use fuel system conditioner 2564968.

Some of the FAME fuels are hydro treated with chemicals which resemble thinners type fluids which obviously change the wear scare limit, and in turn reduces the lubricity factor giving less lubricity than earlier type higher sulphur diesels to fuel system components such as pumps and injectors. The lubricity factor measurement needs to meet ISO 12156-1 to be compatible with sufficient lubrication qualities. This is another scenario where the fuel system conditioner 2564968 can be used if any concerns are raised.

In some very rare instances a HVO or an FAME fuel may cause harder starting on a cold engine in a cold climate condition due to an in-correct Cetane level in the fuel, obviously the lower the temperature the more evident this problem becomes, although I would not expect to see this in the UK inland temperature ranges. If there is a suspicion of this a fuel sample would be needed to verify.

From a warranty perspective any potentially related failures will be investigated on their own merit, providing the fuel meets the specification referred to above, then standard procedures should be adhered to.

I hope this helps clarify the questions raised by the current customers as I am aware you are now receiving them on a regular basis.

Kind regards

Nigel Clewley

Technical Support.