

## YANMAR CO.LTD.

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## Service Bulletin

Reference No.: ISB-11-005

Date: August, 19, 2011

To: whom it may concern

Model: YANMAR Industrial Engines

## Subject: Use of B7 Diesel Fuels in Yanmar® Industrial Engines

Following the Service Bulletin (with Reference No. ISB-11-002) Yanmar issued on February 1, 2011, Yanmar hereby request you to review and follow this new Service Bulletin.

In consistency with other global diesel engine manufacturers and diesel fuel injection equipment manufacturers, Yanmar encourages the development of renewable compression ignition fuels and wishes to clarify our position on the use of bio-diesel fuels in Yanmar Industrial Engines.

In Europe and in the United States, as well as some other countries, non-mineral oil based fuel resources such as RME (Rapeseed Methyl Ester) and SOME (Soybean Methyl Ester), collectively known as FAME (Fatty Acid Methyl Esters), are being used as extenders for mineral oil derived diesel fuels.

After Yanmar conducted the applicability evaluation, Yanmar approves the use of B7 (up to 7% FAME) Diesel which shall not exceed a blend of 7% (by volume) of FAME with 93% (by volume) of approved mineral oil derived diesel fuel in Yanmar Industrial Engines.

Yanmar's limited warranty conditions in case certain engines manufactured by Yanmar are operated with B7 Diesel are as follows:

- 1. Yanmar accepts the use of B7 Diesel only on the conditions that:
  - a) B7 Diesel must comply with "the European Standard EN14214 and EN590 (for Oxidation stability)" if you and/or your clients are located in EU member countries.
  - b) B7 Diesel must comply with "the American Standard ASTM D-6751 and ASTM D-7467(for Oxidation stability)" if you and/or your clients are located in the US.

2. Please purchase B7 Diesel only from recognized and authorized diesel fuel suppliers.

3. Please use only B7 Diesel including methanol as the above relevant regulations state; otherwise, it

may cause corrosion in aluminum and zinc fuel injection equipment components.

4. Please use only B7 Diesel contained certain water level as the above relevant regulations state;

otherwise, it may cause fuel filters plugged and also may increase bacterial growth.

5. Please use only B7 Diesel with low viscosity at high temperatures; otherwise, it may cause

problems on fuel delivery, injection pump seizures and poor injection nozzle spray atomization.

6. Please check the engine oil level daily. If the oil level rises above the oil level of the previous day,

the engine oil needs to be immediately replaced.

7. Please check and confirm the quality of B7 Diesel and other fuel tanks before you start to use it.

Please keep daily maintenance during the use of B7 Diesel and do not forget to regularly flush the fuel

system and fuel storage containers. You may only use B7 Diesel at least within two (2) months from

the time of filling the tank or three (3) months from the time of production by the said fuel suppliers,

whichever comes first.

Yanmar does not warrant and is not responsible for any problems caused by the use of the

deteriorated B7 Diesel or by the use of the B7 Diesel which do not comply with the above relevant

regulations.

Sincerely yours,

Masando Shiokawa

Manager, Quality Assurance Dept.

Power System Operations Div.

Yanmar Co., LTD