

GLOBAL TECHNICAL BULLETIN

Ref No: GTB2008004 Date: February 29, 2008

To: All Yanmar Marine Distributors

Subject: Usage of B5 biodiesel in Yanmar Marine engines

Yanmar Marine International B.V. (YMI) would like to inform you with the following:

In the continuing efforts in creating more environmental friendly products, YMI has approved the usage of B5 biodiesel fuel across the YMI recreational marine engine product line. In general, the usage of biodiesel can reduce particulate matter and the emission of "greenhouse" gases compared to standard diesel fuel. "B5 Biodiesel" is a blend of 95% standard diesel fuel with a maximum content of 5% biodiesel. The "B5" biodiesel base must conform to specification outlined ASTM D6751 or ISO EN14214.

Listing of YMI engines approved for B5 Biodiesel use:

- 1GM10, 2YM15, 3YM20, 3YM30
- 3JH4E, 4JH3-TE, 4JH3-HTE, 4JH3-DTE, 4JH4E, 4JH4-TE, 4JH4-HET, 4JH4AE
- 4LHA-HTP, 4LHA-HTZP, 4LHA-DTP, 4LHA-DTZP, 4LHA-STP, 4LHA-STZP
- 4BY150, 4BY150Z, 4BY180, 4BY180Z, 6BY220, 6BY220Z, 6BY260, 6BY260Z
- 6LPA-DTP, 6LPA-DTZP, 6LPA-STP, 6LPA-STP2, 6LPA-STZP, 6LPA-STZP2
- 6LYA-STP, 6LY2A-STP, 6LY3-ETP, 6LY3-STP, 6LY3-UTP,
- 6CXM-GTE2
- 6SY-STP, 6SY-STP2, 6SY655, 8SY-STP

Precautions:

Biodiesel blends have a higher content of methyl- esters, which may deteriorate certain metal, rubber and plastic components of the fuel system. Other characteristics are higher moisture content, cold temperature flow and damage to painted surfaces. Fuel supply and return system components that are not compatible with biodiesel could deteriorate and cause damage to the engine's fuel system. Failure caused by non-compatible material will void the engine warranty. Customer and or Boat builder are responsible to verify the usage of biodiesel compatible components on the vessel fuel supply and return systems.

If you have any questions regarding this matter, please contact your Regional Headquarter.

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