



# HDAX<sup>®</sup> 9500 SAE 40

## Premium performance extended drain gas engine oil

### Product description

HDAX 9500 SAE 40 is a premium performance dispersant/detergent-type extended drain gas engine oil, designed specifically for gas engines running on landfill gas, biogas and digester gas, and for sour gas applications.

HDAX 9500 SAE 40 is formulated with premium base oils with very low levels of sulphur, nitrogen and aromatics. It contains ashless dispersants, oxidation inhibitors, metallic detergents and anti-wear agents designed to prevent oxidation, corrosion, deposits, wear and scuffing.

### Customer benefits

- Oxidation/nitration resistance with base number retention provides extended drain, and compatible with very low oil feed rate engines
- Dispersant/detergent system with oxidation/nitration resistance helps minimise oil thickening, sludge formation and filter plugging
- Designed for optimum protection against corrosion caused by acidic condensate in intermittent operations in sour gas applications
- Offers piston deposit control, helping provide cylinder liner scuff and abrasive wear protection, and longer engine service life
- Formulated with optimised ash level for valve recession control and helps prevent potential pre-ignition
- Low phosphorus additive formulation allows it to be used with catalyst systems

### Product highlights

- **Offers low oil consumption, extended drain and compatible with low oil feed rate operation**
- **Helps minimise thickening, sludge and filter plugging**
- **Designed for acidic condensate corrosion protection**
- **Wear protection promotes longer engine life**
- **Formulated for valve recession control**
- **Optimised for use in catalyst systems**

#### Selected specification standards include:

GE Jenbacher

MWM

## Applications

- HDAX 9500 is designed for use in four-stroke engines running on landfill gas (including gas containing elevated levels of chlorofluorocarbons and/or siloxane), biogas, digester gas and sour gas.
- The combination of good base number retention and oxidation/nitration resistance helps HDAX 9500 to deliver extended drain capability - even in applications where the oil feed rate is kept deliberately low, placing extra stresses on the lubricant. The dispersant/detergent system is formulated to help prevent sludge formation on cylinder liners, which could interfere with oil flow and lead to higher oil consumption.
- HDAX 9500's robust corrosion control offers improved cylinder liner life even in intermittent operation in sour gas applications, which may result in the formation of significant levels of acidic condensate.
- HDAX 9500 promotes dependable control of carbonaceous deposits on pistons, helping maintain correct piston ring operation and scuffing protection to cylinder liners.
- Optimised ash level helps provide protection against valve recession and the formation of ash deposits in the combustion chamber that could lead to pre-ignition.

HDAX 9500 is recommended for:

- Four-stroke engines fuelled by landfill gas containing elevated levels of chlorofluorocarbons (CFC's) and/or siloxane
- Sour gas applications where corrosive wear is a special concern

## Approvals, performance and recommendations

### Approvals

- GE Jenbacher TA 1000-1109, Fuel Class B (biogas, sewage gas) and Class C (landfill gas) for the following engine types and versions:
  - Type 2 & 3
  - Type 4 Versions A & B
  - Type 6 Versions C & E

### Recommendations

- MWM (Caterpillar Energy Solutions) Gas Engines (biogas)

Typical test data		
Test	Test Methods	Results
Viscosity Grade		SAE 40
<b>Shelf Life: 60 months from date of filling indicated on the product label.</b>		
Density, 15 °C, kg/l	ASTM D4052	0.873
Viscosity, Kinematic, 100 °C, mm <sup>2</sup> /s	ASTM D445	13.4
Pour Point, °C	ASTM D97	-33
Flash Point, COC, °C	ASTM D92	270
Total Base Number, mg KOH/g	ASTM D2896	5.4
Sulphated Ash, % wt	ASTM D874	0.60

The information given in the typical data does not constitute a specification but is an indication based on current production and can be affected by allowable production tolerances. The right to make modifications is reserved. This supersedes all previous editions and information contained in them.

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**Health, safety, storage and environmental** Based on current available information, this product is not expected to produce adverse effects on health when used for the intended application and in accordance with the recommendations provided in the Material Safety Data Sheet (MSDS). MSDS's are available upon request through your local sales office, or via the Internet. This product should not be used for purposes other than its intended use. When disposing of used product, take care to protect the environment and follow local legislation.

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