HDAX® 9300 SAE 40

Premium Performance Gas Engine Oil

Product description

HDAX® 9300 is a premium performance medium ash, dispersant/detergent type gas engine oil formulated specifically for natural gas applications even under heavily loaded conditions, including high output engines in the 10 MWe class. The optimized ash level provides protection against valve recession, while helping to prevent the formation of ash deposits in the combustion chamber that could lead to pre-ignition.

Customer benefits and product features

Customer benefits

HDAX 9300 provides the following potential benefits:

- **Extended drain capability and low oil consumption**
  Exceptional oxidation/nitration resistance and base number retention characteristics enable extended drain capability, even in high BMEP, steel piston engines designed to use a very low oil feed rate.
- **Promotes engine cleanliness**
  Dispersant/detergent system allied to oxidation/nitration resistance helps minimize oil thickening and sludge formation to protect against filter plugging.
- **Long component life**
  Excellent control of carbonaceous deposits on pistons, promoting correct piston ring operation and assisting with scuffing protection to cylinder liners. Helps protect against abrasive wear.
- **Optimized ash level**
  Provides excellent valve recession control and controls potential for pre-ignition.
- **Catalyst compatible**
  Low phosphorus additive system optimized for use with catalysts.

Product features

- HDAX 9300 is formulated with premium base oils which contain extremely low sulphur, nitrogen and aromatics. HDAX 9300 helps prevent sludge formation on cylinder liners, which could interfere with oil flow and lead to higher oil consumption. It is approved by Jenbacher for use in various engine models using natural gas, associated petroleum gas, mine gas and bio-gas.

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Applications

- HDAX 9300 is designed for use in latest generation high output, low emission four-stroke engines burning natural gas. It has a medium ash level, high performance in high Brake Mean Effective Pressure engines with steel pistons (BMEP greater or equal to 22 bar) with long drain. HDAX® 9300 will also deliver excellent performance in lower BMEP engines with aluminium pistons.
- Four-cycle gas engines in cogeneration applications.
- Four-cycle medium-speed stationary spark ignition engines and dual-fuel pilot injection engines operating on sweet natural gas or LPG.
- Suitable for use with fuels containing low levels of sulphur and chloro-fluoro-carbons (CFC). In sour gas/high CFC applications, lubricants with higher base reserve may be required – for example, HDAX 9500 SAE 40 and HDAX 6500 SAE 40.

Product approvals, performance and recommendations

HDAX 9300 has the following approvals:

Jenbacher TA 1000-1108, Fuel Class A[1] for the following engine types/ versions

- Type 9 (All Versions)

Jenbacher TA1000-1109 Fuel Class A[1] for the following engine types/ versions

- Type 6 (versions H and K)
- Type 6 (versions F and J)
- Type 6 (versions C and E)
- Type 4 (version C)
- Type 2 and 3

Consult OEM representatives for independent verification, updates and recommendations.

[1] Natural gas, associated petroleum gas, abandoned mine methane gas, biogas (sulphur <200 mg/10 kWh).

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Service considerations

The sulfated ash, alkalinity reserve and phosphorus content of gas engine oils can be properly matched to the needs of individual applications, taking account of engine design, operating conditions, fuel type and quality, with particular reference to sulfur content and whether or not the engine is fitted with an exhaust catalyst for emission control purposes.

Spark ignition, gas-fuelled engines may be sensitive to the sulfated ash level of the lubricant and to the chemical nature of the ash. Excessive ash can lead to problems such as spark plug fouling, exhaust valve guttering and build-up of pre-ignition-inducing combustion chamber deposits. On the other hand, many engines require a certain amount of lubricant ash to ensure satisfactory valve seat lubrication and to minimize valve seat recession.

Always confirm that the product selected is consistent with the original equipment manufacturer's (OEM's) recommendation for the equipment operating conditions and customer's maintenance practices.

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Typical Test Data

HDAX 9300 SAE 40	TEST METHOD	RESULTS
SAE Grade		**40**
Product Code		**530041**
Density, @ 15°C, kg/l	ASTM D4052	0.88
Viscosity, Kinematic		
mm^2/s @ 40°C	ASTM D445	119
mm^2/s @ 100°C	ASTM D445	13.5
Viscosity Index	ASTM D2270	113
Pour Point, °C	ASTM D97	-33
Flash Point, COC, °C	ASTM D92	270
Base No., mg KOH/g	ASTM D2896	6.2
Sulphated Ash, %wt	ASTM D874	0.70

Minor variations in product typical test data are to be expected in normal manufacturing 2302

ENVIRONMENT, HEALTH, and SAFETY. Information is available on this product in the Material Safety Data Sheet (MSDS) and Customer Safety Guide. Customers are encouraged to review this information, follow precautions, and comply with laws and regulations concerning product use and disposal. To obtain a MSDS for this product, visit the Product Information Center.

This Product Data Sheet (PDS) was produced for the Africa, Middle East and Pakistan region in good faith from the best information available at the time of issue. The specific information included may not directly reflect the local market or conditions. While the values and characteristics are considered representative, some variation, not affecting performance, can be expected. For the most up-to-date, country-specific information, please contact your local customer service center.