

HDAX[®] 5500 LFG

Gas Engine Oil



Product description

HDAX[®] 5500 LFG Gas Engine Oil is a premium quality, medium ash, dispersant/detergent type gas engine oil formulated especially for four stroke landfill gas applications.

HDAX 5500 LFG Gas Engine Oil is a combination of high performance hydrocracked base fluids and a robust inhibitor package provides exceptional protection and maximized oil drain intervals even in the presence of the most aggressive landfill gases

Customer benefits

- **Maximizes oil service life**
Combination of high performance hydrocracked base fluids and specially balanced oxidation inhibitor package and dispersant provides outstanding oxidation and nitration resistance in conventional sweet gas applications and more arduous landfill applications.
- **Lowers operating costs**
Excellent deposit control on valves and pistons reduces oil consumption. The exceptional oxidation and nitration resistance and deposit control extends oil drain capability so that equipment is in service longer generating revenue.
- **Minimizes maintenance costs**
Exceptional oxidation resistance and dispersancy minimizes sludge formation, avoids filter plugging, cylinder head sludge, abrasive polishing wear and oil thickening.
Special formulation gives excellent corrosion control in engines burning high CFC and / or high sulfur containing fuels where high levels of acidic condensate form. This exceptional corrosion control ensures maximum liner life even in intermittent operation. Valve recession is controlled over low ash formulations in those engines where medium ash oils are preferred.
- **Extends engine life to overhaul**
High level of anti-wear additive protects against valve train wear and scuffing of highly loaded parts operating under boundary lubrication conditions. Level and type of ash producing additives reduce valve recession. and potential for pre-ignition.

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Applications

- Four-stroke engines fuelled by landfill gas containing elevated levels of chlorofluorocarbons (CFCs).
- Sour gas applications where corrosive wear is a special concern
- Engines where an increased ash level is preferred for improved valve recession control.
- Sweet gas applications where a higher base number is preferred.

Approvals, performance and recommendations

Performance Standards

- GE Jenbacher approval for Type 2/3 engines burning biogas or landfill gas.
- Waukesha approval for landfill gas applications.

Service considerations

Chlorine containing compounds from solvent and thinners, and fluorine containing chlorofluorocarbons (CFCs), mostly from aerosol cans and refrigeration and air conditioning units, are the major concern when landfill gas is used as an engine fuel. When burned, these compounds release chlorinated and fluorinated compounds which may, in the presence of moisture, form hydrochloric and hydrofluoric acids. Additive components specific to landfill gas engine oil solubilize the acids in the oil and neutralize them before they attack engine components. To minimize acid condensation, engines in landfill gas service tend to be operated at higher water jacket temperatures. This puts added thermal stress on landfill gas engine oils.

Fuel pre-treatment is generally necessary to make landfill gas suitable for reciprocating engines. Used oil analysis (UOA) will permit oil drain intervals to be adjusted as required to accommodate variances in fuel composition. Additionally, used oil analysis is necessary for new engines to ensure results are kept within the warranty protection limits set by the equipment manufacturer.

As with all gas fuelled, spark ignition engine applications, the choice of lubricant ash level will be a trade-off between prevention of exhaust valve recession, prevention of exhaust valve distress and preignition, and provision of adequate alkalinity reserve.

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Typical test data

HDAX [®] 5500 LFG	
SAE Grade	40
Product Code	530034
Base No., D2896, mg KOH/g	6.0
Viscosity	
mm ² /s @ 40°C	144
mm ² /s @ 100°C	15.1
Phosphorus, ppm	270
Sulfated Ash, m%	0.7
Viscosity Index	105

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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 Asia Pacific region based on the best available information at the time of issue. The specific information included may not directly reflect the market or conditions, and may vary. For the most up-to-date, country-specific information, please contact your local customer service center.

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