

# NGEO 2500 MA

## Premium Mid-Ash Oil for Natural Gas Engines Biogas and Landfill

### General Description

NGEO 2500 MA engine oils are specially formulated for use in 4-stroke stationary engines where the manufacture calls for a mid-ash oil or in biogas and land fill gas engines where additional detergent and TBN are desirable. This oil is formulated with select base oils and carefully chosen additives that provide reserve TBN and alkalinity retention to neutralize acidic components that are found in these fuels.

Extended drain intervals have been demonstrated with NGEO 2500 MA. They are best established by used oil analysis. Some engines, whether due to operating conditions, engine design, higher H<sub>2</sub>S, or contaminants in the particular gas used may limit extended oil drains.

NGEO 2500 MA with its unique formulation of base oils and additives is designed to control carbon deposits, scuffing and wear, and resist oxidation and nitration. It is also very effective in minimizing valve recession and providing longer head and spark plug life.

### Expect excellent performance

**in:** Turbocharged and naturally aspirated, Medium to high speed, four cycle natural gas engines such as Caterpillar, Waukesha White-Superior, Guascor and Jenbacher.

### Features and Benefits

**Base Stock:** Blended with high quality, low sulfur, paraffinic base oils for improved thermal and oxidation control. No Bright Stocks are used which reduces deposits.

**Oxidation/Nitration control:** Oxidation inhibitors and dispersants control oil thickening maximize oil life and oil drains thus reducing down time.

**Deposit Control:** A special patented detergent helps neutralize acids, provides improved TBN retention, and reduces engine and valve deposits that provide extended engine life.

**Anti-wear Protection:** Protects highly loaded engine parts by reducing piston, ring, and liner wear.

**Catalyst Compatible:** 2500 MA is formulated to be compatible with engines using catalytic converters for emission control.

**Field Tested Technology:** specifically in conventional, biogas, and land fill applications.

**Typical Applications:** biogas, landfill, pipelines, gas gathering, crude and gas transmission, and power generation.

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### Typical Customer

Owners/operators of:

- Natural gas, synthetic gas, biogas, land fill gas fueled stationary engines specifying a mid ash oil.
- Dairies and feed lots using digesters
- Land fill operations.
- Municipalities

### Health & Safety:

A complete material safety data sheet is available upon request. Used motor oil contains combustion by-products which may be harmful. Avoid prolonged or repeated skin contact. Wash clothing and exposed areas with soap and water. Don't pollute - return used oil to a collection center.

### Typical Properties

Property	NGEO 2500 MA
SAE Grade	40
API Gravity	28.9
Flash Point, °F	480
Viscosity cSt @ 40°C (SUS)	145 700
cSt @ 100°C (SUS)	15.0 77
Viscosity Index	105
Pour Point, max, °F	-20
Total Base No. (TBN)	10
Sulfated Ash, %wt	0.95
Phosphorus, ppm	Less than 250

The typical properties listed reflect the general characteristics of the product, and are not manufacturing specifications. Normal batch-to-batch variations should be expected.

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