



Lubricants

Gas Engine Markets

2-STROKE

- Gas Transmission
- LNG Compression
- CNG compression
- Refineries

4-STROKE

- Gas Transmission
- LNG Compression
- CNG compression
- Power Generation
- Land Fills
- BioGas
- On-Road Highway
- Municipal Fleets

Engine Type & Application Influence Oil Specification

Stationary Gas Engines

2-STROKE

- Low speed (250-500 rpm)
- Consume the oil volume used for liner lubrication
- Need ashless oils (<0.1% ash) to avoid pre-ignition
- **Critical parameters are exhaust port blocking, pre-ignition and spark plug fouling**



4-STROKE

- Medium to high speed (500-2,000 rpm)
- Higher thermal stress due to lower oil consumption, exhaust gas blow-by and oil break down
- Require low ash engine oils when using NG
- **Critical parameters are valve seat recession, oxidation/nitration, wear and deposit**





Lubricants

Stationary Gas Engines & Compressors

Engines

- Waukesha
- Caterpillar
- Jenbacher
- MTU
- Wartsila
- MAN
- Dresser Rand
- Superior
- Cummins
- Enterprise

Integrals

- Ajax
- Cooper Bessemer

Compressors

- Ariel
- Dresser Rand
- Gardner Denver
- Gemini
- Howden
- LeROI
- Nuovo Pignone
- Superior
- TSI - Turbochargers

Manufacturer's Issue Oil Specification Per Product