



Busgard GEO oil offers the following features and benefits:

- ◆ **Unique low-ash formulation for new lean burn/high-swirl gas-fueled engines**
- ◆ **Field tested and proven in gas-fueled bus fleets in major transit fleets**
- ◆ **Meets performance requirements of Cummins 20074 and of API Service Category CD**
- ◆ **Minimizes varnish and sludge deposits through exceptional oxidation/nitration control**
- ◆ **Provides excellent valve train wear control**
- ◆ **Improved viscosity control for long-lasting stay-in-grade performance**
- ◆ **Excellent valve deck cleanliness and oil thickening control**
- ◆ **Designed for the higher temperatures of gas-fueled vehicles**

Primary Applications

Busgard GEO natural gas-fueled engine oil was originally developed to meet the demanding requirements of Cummins L-10 engines. In severe laboratory and field tests, Busgard GEO consistently surpassed competitive oils in its ability to resist nitration and oxidation and keep pistons exceptionally clean.

Reformulated Busgard GEO is now designed to provide the same outstanding performance advantages in a wider range of natural-gas-fueled applications. The new formulation, based on the older, field-proven formulation, provides excellent performance in both roller-follower valve trains and in slider-follower applications.

The new Busgard GEO formulation is recommended for Cummins "B" and "C" Series engines, as well as Detroit Diesel Series 50G engines. For Cummins L -10 our first recommendation is Essolube GMA Plus 15W40 followed by acceptable performance with Busgard GEO. Busgard GEO also meets the performance requirements of Cummins CES 20074 and Detroit Diesel 7SE272-9510.

Busgard GEO is available in an SAE 15W-40 multi-grade. A multi-grade oil offers significant advantages in natural-gas-fueled engines, including: improved cold-temperature engine starting and pumping and reduced oil consumption (10-20%) relative to single grades.

Performance Features

Busgard GEO, first field tested in the early 1990s, has been used successfully in natural-gas-fueled engine fleets throughout the United States. In the Cummins C Series 8.3 litre dynamometer test, which measures valve train wear, the newly reformulated product performed outstandingly, minimizing camshaft, tappet and ball socket wear, and demonstrating superb control of liner and bearing wear.

Precautions

Busgard GEO is manufactured from high quality petroleum base stocks, carefully blended with selected additives. As with all petroleum products, good personal hygiene and careful handling should always be practiced. Avoid prolonged contact to skin, splashing into the eyes, ingestion or vapour inhalation. Please refer to our ESSO Material Safety Data Sheet for further information.

Note: This product is not controlled under Canadian WHMIS legislation.

Typical Properties

SAE Grade	15W-40
API Service Category	CD
Kinematic Viscosity cSt @ 40°C, ASTM D 445 cSt @ 100°C	108 14.9
Viscosity Index	136
Density, kg/m ³ lb/gal	881.1 7.33
Pour Point, °C	-30
Flash Point, COC, °C	205
Sulfated Ash, mass %	0.54
Gravity, °API	29.1
Calcium, ppm	1200
Phosphorus, ppm	710
Zinc, ppm	800
Total Base No., ASTM D 2896	5.1

The values shown above are representative of current production. Some are controlled by manufacturing and performance specifications while others are not. All may vary within modest ranges.