



MORBARK SUPER PLUS SAE 15W-40 ENGINE OIL



INTRODUCTION

MORBARK SUPER PLUS ENGINE OIL is a heavy duty oil recommended for engines fueled by diesel, gasoline, propane, or compressed natural gas (CNG), operating on highway or off-highway in forestry, mining, construction, farm and marine applications.

MORBARK SUPER PLUS ENGINE OIL has superior soot dispersing performance required by the latest low emission engine designs, beyond API CH-4

MORBARK SUPER PLUS ENGINE OIL is blended from advanced HT severely hydrocracked base oil and the latest additive technology. Extensive testing including fleet trails clearly prove the outstanding benefits of MORBARK SUPER PLUS ENGINE OIL.

PERFORMANCE BENEFITS

- **Oil stays-in-grade and retains new oil properties for extended duration**
 - Superior Soot Handling-Exceptional Mack T-8E and Cummins M-11 test results
 - Twice the acceptable oxidation resistance of the industry standard Seq. IIIE engine test
 - Excellent resistance to viscosity loss
 - Stable oil pressure
- **Easier, faster cold weather starts**
 - Excellent low temperature flow properties
 - Less wear on start-up
- **Extended time between rebuilds and increase resale value**
 - Mack T-9, Cummins M-11 results demonstrate outstanding engine ring, liner, valve train and bearing wear resistance
 - Strong oil film stops metal to metal contact

- **Minimize down time and reduce operating and maintenance costs**

- Exceptional engine wear protection
- Superior soot handling protects against abrasive wear and sludge formation
- Reduced filter plugging

APPLICATIONS

MORBARK SUPER PLUS ENGINE OIL is formulated to meet the following requirements:

Engine Service Classifications

SAE Grade	API Category	Also suitable for Use where Recommended
15W-40	CF-4, CG-4, CF-2, CF/SJ	CF-4, CE, CD-11, CD, SH, SG

Diesel Engine Manufacturers

Cummins CES 20071, 20076
Mack EO-M, EO-M Plus
Caterpillar SEBU 6385
JohnDeere 6466A
Detroit Diesel 7SE270
Detroit Diesel 7SE273 Cat. 1
Mercedes Benz 228.1, 229.1
Caterpillar 3600
Volvo VDS, VDS-2
MTU Type 1
ACEA E2
MAN 271

TYPICAL PERFORMANCE DATA

PROPERTY	ASTM TEST METHOD	MORBARK SUPER PLUS SAE 15W-40 ENGINE OIL
Flash Point, °C	D92	230
Kinematic Viscosity cSt @ 40°C cSt @ 100°C	D445 D445	112 15.1
Viscosity Index	D2270	139
High Temp/High Shear Viscosity cP @ 150°C	D4683	4.13
Cold Cranking Viscosity cP @ °C	D5293	2,980 @ -15
Pour Point, °C	D97	-42
Borderline Pumping Viscosity cP @ °C	D3829	19,200 @ -25
Sulphated Ash, % wt.	D874	1.2
Total Base No. (TBN) , mg KOH/g	D2896	9.0

The values quoted above are typical of normal production. They do not constitute a specification.

APPLICATIONS (CONT'D)

In addition, MORBARK SUPER PLUS ENGINE OIL meets the engine warranty requirements of Navistar, Allis-Chalmers, Case IH, Fiat-Allis, GMC, White, Deutz, Continental, Hino, Komatsu, Perkins.

Stationary Diesel Power Generation

MORBARK SUPER PLUS ENGINE OIL may be used in stationary power generation service where an SAE 15W-40 diesel engine oil is specified.

Gasoline Engines

MORBARK SUPER PLUS ENGINE OIL may be used in gasoline engines where API SJ or an earlier specification is required. Consult your owner's manual.

Transmissions and Hydraulics

- Caterpillar powershift transmissions, semi-automatic transmissions and torque convertors where a TO-2 fluid is specified
- Allison transmissions and torque convertors where a C-4 fluid is specified
- Clark powershift transmissions

HEALTH AND SAFETY

MORBARK SUPER PLUS ENGINE OIL has no adverse effects on health provided they are used as directed. Material Health and Safety Data Sheets can be obtained from your Morbark representative, or by calling the number below.



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