



Makina Grease & Lubricants Manufacturing L.L.C.

Ultra

Description

Makinalube Ultra been specially formulated to possess the high detergency/dispersancy, wear protection and acid neutralizing capacity needed to satisfy the stringent requirements of the new API specification CF-4/SJ.

Caterpillar requires the specification for their latest technology, high output diesel engines. The product also fully meets the requirements of engine builders such as Cummins, Detroit Diesel, Mack, Mercedes-Benz etc.

Application

Makinalube Ultra can be used in all high speed diesel engines in operation today except where an SHPD or Zinc free oil is specified by the engine manufacturer. It offers the following benefits:

- Can be used in the latest Caterpillar engines.
- Universal high-speed diesel engine oil.
- Reduces piston crown deposits.
- Minimizes carbon build up behind piston rings.
- Minimizes piston ring sticking tendencies.
- Reduces cylinder bore polishing.
- Reduces oil consumption even after extensive service.
- Keeps engine interiors clean and free of sludge, carbonaceous deposits and lacquer.
- Keeps soot and combustion debris in suspension thus keeping the engine clean.
- Minimizes valve train wear, piston ring and bearing wear resulting in long engine life.

Makinalube Ultra meets the following performance levels:

- API CF-4/SJ.
- VOLVO VDS
- MIL-L-2104E
- MB 228.1, 227.1
- ALLISON C-4
- MAN 271
- CCMC D4/G4/PD2
- VW501.01/505.00
- MIL-L-46152E
- MACK EO-K/2
- CATERPILLAR TO-2



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Typical Characteristics

| PROPERTIES | UNITS | TEST METHOD | VALUE | | | | |
|---------------------|--------------------|-------------|--------|--------|--------|--------|--------|
| SAE Grade | | DIN 51 511 | 15W-40 | 15W-50 | 20W-40 | 20W-50 | 20W-60 |
| Density @ 15 °C | kg/m ³ | ASTM D-4052 | 888 | 879 | 888 | 891 | 893 |
| Viscosity @ - 15 °C | mPa.s | ASTM D-5293 | ----- | ----- | 8000 | 7000 | 7000 |
| Viscosity @ - 20 °C | mPa.s | ASTM D-5293 | 6000 | 6000 | ---- | ----- | ----- |
| Viscosity @ 100 °C | mm ² /s | ASTM D-445 | 15.4 | 18.8 | 15.4 | 18.1 | 23.5 |
| Viscosity Index | | ASTM D-2270 | 140 | 147 | 110 | 135 | 139 |
| Flash Point, COC | °C | ASTM D-92 | 240 | 238 | 230 | 236 | 230 |
| Pour Point | °C | ASTM D-97 | - 27 | -27 | -21 | -21 | -21 |
| Sulphated Ash | % wt. | ASTM D-874 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |
| Base Number | mg KOH/g | ASTM D-2896 | 10 | 10 | 10 | 10 | 10 |