



All Fleet Motor Oils

GRADES: SAE 10W-30, SAE 10-10W, SAE 30-30W, SAE 40

ALL FLEET MOTOR OIL is a unique blend of patented oil technology to meet the most stringent requirements for gasoline and diesel engines.

New diesel designs to meet emission requirements, adapt to low sulfur fuels, and retard injection timing can lead to increased soot loading in a lubricant, higher wear, oil thickening and filter plugging. In addition, fleet owners are demanding longer drain intervals and lower consumption. Oil that meets these new requirements is called HPD, for High Performance Diesel. The oil has better soot handling properties, greater resistance to oil thickening and lower wear rates.

1. This new oil technology provides the best service for both gasoline and high performance diesel service reduces inventory and prevents mistakes.
2. Minimizes lubrication costs by utilizing equipment manufacturer's maximum drain recommendations.
3. Meets Chrysler, General Motors and Ford specifications for heavy-duty gasoline engines. Sequence IIIE tests for resistance to oil thickening shows 600% more protection from oil thickening than former SF oils. Sequence VE data provides 60% more sludge control and 30% more anti-wear than SF oils.
4. Meets Detroit Diesel requirements, including ash content of 1% maximum. Exceeds the API CD-II category for two-stroke cycle diesel engines. This category is defined in performance requirements of the CRCL-38, Caterpillar 1G2 and GM6V-53T engine tests.
5. Exceeds API CF-4 requirements for improved control of oil consumption and piston deposits as tested by Caterpillar 1-K test.
6. Exceeds API CF-4 requirements for improved control of oil consumption and piston deposits as approved by the Caterpillar 1K test.

ADVANTAGES

- High temperature thermal stability – outstanding resistance to oil thickening.
- Long bearing and valve train life due to excellent anti-wear and anti-corrosion protection.
- Can be safely used at both low and high temperatures because of excellent protection against carbon deposits, low temperature sludge and varnish formation.
- Seal leakage problems are minimized as a result of proven elastomer compatibility with nitrile, silicone and polyacrylate seals.

MEETS OR EXCEEDS THE REQUIREMENTS FOR ALL THE FOLLOWING SPECIFICATIONS:

API Service 10w-30 SM,SL, SH, CJ-4,CI-4,CI-4+	CCMC Gasoline G1 & G2	Man 270, 271
API Service Straight grades 10W CF, SM, SJ, SH 30W & 40W CF, CF-2 CE, SM, SJ, SH	CCMC Diesel D1 & D2	Perkins
Chrysler Motors MS-6395D	Daimler-Benz Sheet 227.0, 227.1	KHD
General Motors 6085M	Volkswagen 500-0, 501.01, 505.00	10W and 30W Caterpillar TO-2
Ford Motors ESE M2C 153-E	Volvo	10W and 30W Allison C-3 and C-4
MIL-L-46152E	Scania	John Deere JDQ-78
10W and 30W MIL-PFR-2104G	Iveco	10W-30 Caterpillar ECF-1, ECF-2, ECF-3
MIL-45199B (Caterpillar Series 3)	International Harvester	10W-30 Cummins CES 20081
Mack EO-O Premium Plus, EO-M Plus, EO-N Plus	Ford Diesel, Detroit Diesel	RVI

TYPICAL PHYSICAL & CHEMICAL SPECIFICATIONS

SAE Grade	SAE 10W-30	SAE 10-10W	SAE 30-30W	SAE 40
Viscosity Index	143	98	95	95
Viscosity 40°C, CST	69	39.0	96.5	146
Viscosity 100°C, CST	10.6	6.0	10.8	14.4
Viscosity 100°F, SUS	350	213	530	815
Viscosity 210°F, SUS	62	48	66	78
Viscosity CCS -20°C, cP	2550	-	-	-
Pour Point, °C (°F)	-37 (-35)	-32 (-25)	-26 (-15)-3	-23 (-10)
Flash Point, °C (°F)	207 (405)	204 (400)	224 (435)	238 (460)
Fire Point, °C (°F)	227 (440)	232 (450)	249 (480)	260 (500)
API Gravity @ 60°F	29.0	29.8	28.4	26/7
Weight per Gallon	7.73	7.32	7.38	7.45
TBN	7.5	10.0	10.0	10.0
Sulfated Ash, % wt.	0.95	0.99	0.99	0.99
Zinc, % wt.	0.126	0.126	0.126	0.126