



WORLD CLASS LUBRICANTS FOR TROPICAL CONDITIONS

#### **GENERAL**

The **Ultra Duty** is a premium quality lubricant for high-speed, four-stroke engines designed to meet 2007 exhaust emission standards and to surpass the performance demands of all previous diesel lubrication categories.

New engine design modifications use higher cylinder pressures, increased piston ring zone temperatures and, in most cases, Exhaust Gas Recirculation (EGR). **Ultra Duty** is specifically engineered to sustain engine durability where exhaust gas re-circulation (EGR) is used.

It is especially suited for high speed naturally aspirated and turbo-charged four stroke diesel engines in the off highway mining & construction, marine, city fleet and long haul on highway applications. It also meets gasoline performance standards; therefore it is ideal for mixed fleet applications.

**Ultra Duty** (API CI-4/SL) is also specifically compounded for use with diesel fuels ranging in sulphur content up to 0.5% weight. It is backward compatible and can be used where CD, CE, CF-4, CG-4 and CH-4 oils are recommended.

Ultra Duty provides for enhanced:

- Durability where EGR is used
- Detergency
- Corrosion and Rust Protection
- Reduced Piston Deposits
- Cylinder and Piston-ring wear performance Oxidation Stability
- Thermal Stability

# PERFORMANCE SPECIFICATIONS

**Ultra Duty** meets or exceeds the exacting test requirements of:

- API Service Categories CI-4 PLUS, CI-4, CH-4, VG-4, CF-4, CF, SL
- Cummins CES 20078, 77, 76, 71
- MTU Category 2
- Detroit Fluids Specification (DFS) 93K214
- Mack EON Premium Plus 03
- MAN M3275
- Volvo VDS-3
- Caterpillar ECF-2, ECF-1a

### KEY BENEFITS

Ultra Duty provides optimum protection against corrosive and soot related wear tendencies, piston deposits, oxidative thickening, loss of consumption control, foaming, degradation of seal material and viscosity loss due to shear. Non-EGR engines using Ultra Duty oil extend drain intervals; reduce make-up oil need, and lower operating costs/downtime.

The use of **Ultra Duty** would result in:

- Protection against bearing failure
- Reduced valve train wear
- Control of viscosity increase
- Good dispersancy and alkalinity
- Easier starting/pumping
- Better fuel economy

- Low piston-zone deposits
- Ring-stick prevention
- Protection against bore polish
- Reduced oil consumption
- Reduced harmful emissions

#### MAIN APPLICATIONS

- Suitable for a wide range of heavy-duty engine applications inclusive of Euro 2, 3 and 4 engine technologies.
- Exhaust Gas Recirculation (EGR) and application of other emission control systems.
- High speed naturally aspirated, turbocharged, and supercharged diesel engines in the construction and road transport Industry.
- Off highway mining & construction, marine, city fleet and long haul on highway applications.
- Mixed fleet engine oil for diesel/gasoline combinations where SAE 15W-40 lubricants recommended.

	TEST METHOD		
SAE Viscosity Grade	J 300	15W40	
Kin. Viscosity @ 40°C-cSt	ASTM D <mark>4</mark> 45	113.43	
Kin. Viscosity @ 100°C-cSt	ASTM D445	14.94	
Viscosity Index	ASTM D2270	136	
Specific Gravity, 60/60°F	ASTM D1298	0.8828	
Pour Point, °C	ASTM D97	-27	
Closed Flash Point, °C	ASTM D93	210	
Zinc Content, % wt	IP 308	0.15	
TBN, mg KOH/g	ASTM D4739	10.5	

## TYPICAL PROPERTIES

## HEALTH AND SAFETY

**Ultra Duty** is unlikely to pose any health or safety hazards when used in the recommended applications, provided good standards of personal and industrial hygiene are observed. Please refer to the Material Safety Data Sheet (MSDS) for further information.