



## **LONG-LIFE<sup>®</sup> GOLD HEAVY DUTY ENGINE OIL**

### **Premium Motor Oil For Heavy-Duty Diesel and Gasoline Engines**

#### **PRODUCT DESCRIPTION**

PENNZOIL<sup>®</sup> LONG-LIFE<sup>®</sup> GOLD is a premium heavy duty engine oil with a formulation that exceeds the stringent performance requirements of the new API CJ-4 service category for 2007 diesel engines. PENNZOIL<sup>®</sup> LONG-LIFE<sup>®</sup> GOLD also provides excellent quality for diesel engines built prior to 2007 and in both on- and off-highway applications.

PENNZOIL<sup>®</sup> LONG-LIFE<sup>®</sup> GOLD SAE 15W-40 is formulated to deliver protection to diesel engine and helps provide long life for engines as it:

- protects against all forms of wear
- resists high temperature breakdown due to excellent oxidation stability
- provides outstanding soot control
- will not shear out-of-grade, even in the most stressful conditions due to outstanding shear-stability
- protects moving parts while it helps to maximise engine performance and maintain fuel economy.

PENNZOIL<sup>®</sup> LONG-LIFE<sup>®</sup> GOLD HEAVY DUTY ENGINE OIL has been tested and proven effective in all kinds of engines, including Caterpillar, Cummins, Detroit Diesel, , Mack, Mercedes-Benz, International, Volvo, as well as others. Pennzoil Long-Life<sup>®</sup> Gold helps extend the life of virtually all diesel engines..

#### **APPLICATION**

PENNZOIL<sup>®</sup> LONG-LIFE<sup>®</sup> GOLD HEAVY DUTY ENGINE OIL is truly a universal oil. It is recommended for use in on- and off-highway medium and heavy duty diesel vehicles built prior to 2007 and models built from 2007, . . .

PENNZOIL<sup>®</sup> LONG-LIFE<sup>®</sup> GOLD meets or exceeds the performance requirements of the following diesel engine manufacturers: Caterpillar, Cummins, Detroit Diesel, International, Mack, Mercedes, Volvo, as well as others. PENNZOIL<sup>®</sup> LONG-LIFE<sup>®</sup> GOLD also meets or exceeds the performance requirements of the following gasoline engine manufacturers: Daimler-Chrysler, Ford, and General Motors. PENNZOIL<sup>®</sup> LONG-LIFE<sup>®</sup> GOLD HEAVY DUTY MULTIGRADE ENGINE OIL is recommended wherever engine manufacturers specify the use of an engine oil meeting API Service Classification CJ-4, CI-4 PLUS, CI-4, CH-4, CG-4, CF-4, CF and SM or SL, or any combination of these. Always refer to the vehicle owner's manual for the correct viscosity choice.

#### **BENEFITS**

- Helps extend engine life
- Provides a shield against all forms of wear
- Helps maintain fuel economy
- Helps reduce oil consumption
- Outstanding soot control
- Consistent oil pressure for thorough engine lubrication
- Recommended for both diesel and gasoline engines - single line of motor oils for mixed fleets
- Recommended for engines incorporating Exhaust Gas Recirculation (EGR)
- Recommended for turbocharged diesel engines

- Minimizes piston and combustion chamber deposits
- Fights sludge and varnish
- Effectively neutralizes acids to help keep corrosive wear to a minimum
- Contains anti-wear and anti-scuff agents
- Meets requirement of Diesel Particulate Filters.

## PERFORMANCE SPECIFICATIONS

Meets or exceed the performance requirements of :

- API CJ-4, CI-4 Plus <sup>1</sup>, CI-4, CH-4, CG-4, CF-4, CF/ SM, SL
- Mack EO-O Premium Plus 2007<sup>1</sup>
- Cummins CES 20081
- Detroit Diesel 93K218<sup>1</sup>
- Caterpillar ECF-1, ECF-3
- Volvo VDS-4

<sup>1</sup> SAE 15W-40 only

## HEALTH AND SAFETY

Guidance on Health and Safety are available on the appropriate Material Safety Data Sheet, which can be obtained from your Shell representative.

## PROTECT THE ENVIRONMENT

Take used oil to an authorized collection point. Do not discharge into drains, soil or water

## Typical Physical Characteristics

### Typical Properties of Pennzoil® Long-Life® Gold

	Test Method	SAE Grade	
		15W-40	10W-30
Gravity, °API	D 1298	29.2	29.0
Viscosity			
@ 40°C, cSt	D 445	118	80
@ 100°C, cSt	D 445	15.5	12.0
Viscosity Index	D 2270	139	144
Flash Point, °F	D 92	400 min.	400 min.
Pour Point, °F	D 97	-25	-23
Neutralization No.TBN-E	D 2896	10.6	10.6
Sulfated Ash, %wt	D 874	1.0 max.	1.0 max.

These characteristics are typical of current production. While future production will conform to Pennzoil's specification, variations in these characteristics may occur.