



## **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 maximize 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 / SL / SJ, 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, CI-4, CH-4, CG-4, CF-4, CF/ SM, SL, SJ
- ACEA	E7 <sup>1</sup>
- Caterpillar	ECF-3, ECF-2
- Cummins	CES 20081 <sup>1</sup>
- Detroit Diesel	93K218 <sup>1</sup> , 7SE270 <sup>1</sup>
- Deutz	DQC III-05 <sup>1</sup>
- Mack	EO-O Premium Plus 2007
- MAN	M3275 <sup>1</sup>
- Mercedes-Benz	228.3 <sup>1</sup> , 228.31 <sup>1</sup>
- MTU	Category 2 <sup>1</sup>
- Volvo	VDS-4 <sup>1</sup> , VDS-3 <sup>1</sup>
- Renault Trucks	RLD-3 <sup>1</sup>

<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	
		<b>15W-40</b>	<b>10W-30</b>
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.