

# *Master Duty HD-3*

## *Diesel Engine Oil*

### DESCRIPTION

*Master Duty HD-3* is a Multi-grade lubricant oil formulated for high speed and four-stroke diesel engines which a service category of CH-4. The oils are compounded for use in all applications with diesel fuels with sulfur content ranging up to 0.05% by weight. These oils are especially effective at sustaining engine durability where exhaust emission componentry may be used.

### APPLICATION

*Master Duty HD-3* can be used in all types of diesel engines, high speed diesel engines equipped with Exhaust Gas Recirculation (EGR), and light/medium/heavy-duty services, turbo-charged four-stroke diesel engines, and all construction diesel engine equipment. It can also be used in lower performance levels of diesel engines.

### BENEFITS

- Superior oil for turbo-charged four stroke diesel engines.
- Outstanding protection against rust, wear and sludge formation.
- Impressive thermal stability and oxidation resistance.
- Flows faster to improve circulation throughout the engine, providing excellent startup.
- Maintains engine's cleanness.
- Outstanding low-temperature fluidity.
- Immediate lubrication in cold conditions during engine startup.

### PERFORMANCE

API	CH-4/SL
ACEA	E7/E4
Daimler Chrysler	MB 228.3

## Specifications

Test Parameter	Units	Test Limits		Test Method
		15W/40	20W50	
SAE Grade		15W/40	20W50	-
Appearance	-	C&B	C&B	Visual
Density @ 15°C	g/cm <sup>3</sup>	0.875	0.880	ASTM D-4052
Viscosity @ 40°C	cSt	107	157.4	ASTM D-445
Viscosity @ 100°C	cSt	12.5:16.2	16.3:21.8	ASTM D-445
Viscosity Index	-	135	128	ASTM D- 2270
CCS	mPa-S	6790@-20	9300@-15	ASTM D-5293
Flash Point (COC), min.	°C	238	256	ASTM D-92
Pour Point	°C	-27	-24	ASTM D-97
Base Number	mg /gr	11.5	11.5	ASTM D-2896
Sulfated Ash	%wt	1.0	1.0	ASTM D-874

- These specifications are typical of current production. Whilst future production will confirm to Petro-S specifications. Variations on these specifications may be occurring.