

# **Puma Marine TBN 50 SAE 40**

Puma Marine TBN 50 SAE 40 is an API CF engine oil intended for use in four-stroke diesel engines operating with high-sulphur fuels, thus requiring an especially high TBN, and in particular running conditions. It is specifically recommended for application in four-stroke diesel engines operating on poor quality, high sulphur, residual fuels or frequently experiencing low temperatures in the piston-liner area.

- ✓ Oxidation Stability
- ✓ Anti-Foam Performance
- ✓ Anti-Wear Protection
- ✓ High Detergency

# **Designed to Perform**

#### Anti-wear Protection - Longer Equipment Life

Proven Anti Wear Additive packages provide greater resistance to sliding wear thus ensuring efficiency and long life of all moving parts of which greatly reduce the need for engine servicing and overhauls.

#### Oxidation Resistance - Longer Oil Life

It has extremely good oil life and lubricant stability even when subjected to unusually high thermal stresses; this property minimizes sludge and deposit formation, thus preventing blocking of ports, valves and controls, while guaranteeing that the oil remains properly fluid. Maintenance costs are therefore reduced and the useful service life of the oil is extended.

#### **High Detergency - Increased Engine Cleanliness**

It has excellent detergency properties, making it particularly suitable for use in supercharged engines. It also has high dispersant properties. The lubricant is thus very resistant to the formation of lacquer and varnish, as well as sludge and other engine deposits. It prevents carbon deposits on piston lands and grooves, thus keeping the rings free even in the most highly-rated engines. It helps prevent ring sticking and keeps pistons clean, while maintaining soot deposits in suspension ready to be filtered.

### Anti-foam - Increased Performance

Easy release of entrained air which will prevent difficulties with pumps and controls which can cause irregularities in performance and other problems arising from the compressibility of air bubbles.

#### **Anti-corrosion & Anti-rust Properties**

It has particularly good anticorrosion properties

which effectively protect the engine from corrosion from combustion moisture and acids. These additives inhibit the oxidation of internal surfaces of the engine and therefore prevent operating difficulties and breakdown of the oil caused by metallic oxides that would otherwise form within the engine.

#### **High TBN Retention**

Its TBN retention properties remain high even after extended use, thus ensuring effective neutralization of acidic products.

#### **Demulsibility - Engine Life Extension**

Prevents the formation of water in oil emulsion which enters the system through leakage or condensation. The fluids therefore maintain their lubricating power and anticorrosion performance even under these circumstances.

#### **High Sulphur Fuel Oils**

It has enough alkalinity (TBN) reserves to efficiently combat the formation of acid mists resulting from the use of very-high sulphur fuel oils. This reserve is also particularly useful in engines exhibiting especially low oil consumption or operating at such low liner temperatures as to favour sulphuric acid condensation.

#### **High Polarity**

Its high polarity provides superior protection of engine parts from attack by moisture and salinity.

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Meets or Exceeds the requirements of the following specifications:

API CF-4



# **Typical Physical Characteristics**

Property	Temp	Units	Test Methods	Results
SAE Grade			SAE J-300	40
Kinematic Viscosity	@ 100℃	cSt	ASTM D-445	15.7
Kinematic Viscosity	@ 40℃	cSt	ASTM D-445	160
Viscosity Index	-	-	ASTM D2270	100
Flash Point (COC)	-	${\mathfrak C}$	ASTM D-92	235
Pour Point	-	${\mathfrak C}$	ASTM D-97	-18
Density	@ 15 ℃	g/mL	ASTM D-4052	0.92
TBN		mg KOH/g	ASTM D-2896	50

These characteristics are typical of current product methods whilst future production will conform to Puma Lubricants specifications, variations in these physical characteristics may occur.

### **Health & Safety Environment**

- This product is unlikely to present any significant health and safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained.
- Avoid contact with eyes and skin, use proper impervious gloves with used oil. After skin contact, wash immediately
  with soap and water. Guidance on health and safety is available on the appropriate Safety Data Sheet (SDS) which
  can be obtained from <a href="mailto:pumaenergypng.datasheetdownloads.com">pumaenergypng.datasheetdownloads.com</a>, sds.pumaenergy.com.au

# **Protect the Environment**

 Take used oil / Greases to an authorised collection point.

Do not discharge used or new oil into drains, soil or water.

# **Additional Information**

 Technical advice may be obtained from your Puma Energy Representative.