

## **V.I. Plus**

Engine Oil

No. 406

SAE 30, 40

### **DESCRIPTION:**

The ultimate in engine oil performance: **V.I. Plus**. This 14 TBN, Mack EO-K2 super universal oil, compounded with Frontier's exclusive extender additive package ETX, is superior to all other engine oils on the market for either gasoline or diesel engines. This exclusive formulation exceeds API SH/CF-2 performance requirements as well as all major engine manufacturers' specifications.

### **PERFORMANCE CHARACTERISTICS:**

Engine designs are changing rapidly to meet emission requirements. Engines must run "drier" to reduce particulate emissions. Engines also must adapt to low-sulfur fuels and retarded injection timing, which can increase the soot loading in a lubricant leading to higher wear, oil thickening and filter plugging. The engines being developed today have higher operating temperatures, and are more susceptible to deposits. **V.I. Plus** has been developed specifically for these engines with a higher thermal stability and the recommended maximum detergency to reduce varnish and gum deposits and to greatly reduce oil oxidation and oil consumption. These benefits not only protect low-emissions diesels from wear and deposits, they also provide maximum protection in pre-1994 engines running on low-sulfur fuel as well. Extensive field tests show superior deposit control to any other oil on the market. The reason for better performance is increased levels of reserve alkalinity. Detergent/Dispersant alkalinity has been directly correlated with reduced ring wear, improved piston cleanliness, reduced bearing wear, improved oil consumption, extended service intervals and better fuel economy.

### **SUMMARY:**

**V.I. Plus** Engine Oil provides the following advantages:

- \* Meets or exceeds the performance requirements of current and proposed engine oil specifications
- \* Protects low-emission diesel engines from wear and deposits
- \* Provides excellent wear and deposit protection in pre-1994 engines running on low-sulfur fuel
- \* Resists soot-related viscosity increase, filter plugging and wear
- \* Extends engine life while meeting emissions requirements
- \* Improves engine durability, keeping equipment in as new condition

### **PERFORMANCE CAPABILITIES:**

Meets and exceeds the following performance requirements:

API: CD, CDII, CE,CF/CF-2  
API: SH  
MIL-L-2104E, MIL-L-2104F  
MACK EO-K, EO-K/2

CATERPILLAR TO-2  
CUMMINS NTC-400  
DETROIT ALLISON C-3  
GM 6041-M, 6049-M, 6048-M

**TYPICAL SPECIFICATIONS:**

<b>SAE GRADE:</b>	<b>30</b>	<b>40</b>
Viscosity @ 100°C, cSt:	12.2	15.5
Viscosity @ 40°C, cSt:	103	147
Viscosity Index:	109	108
Gravity, ° API:	26.7	25.3
Flash Point, COC, °F:	450	460
Pour Point, °F:	0	+5
TBN, ASTM D-2894:	14	14
Oxidation Stability:	Exceeds Requirements	Exceeds Requirements
Rust and Corrosion:	Exceeds Requirements	Exceeds Requirements
Anti-Wear Protection:	Exceeds Requirements	Exceeds Requirements

Values shown here are typical, and may vary.