

Title (en)

HIGH PERFORMANCE NON-ZINC, ZERO PHOSPHORUS ENGINE OILS FOR INTERNAL COMBUSTION ENGINES

Title (de)

ZINK- UND PHOSPHORFREIE HOCHLEISTUNGSMOTORENÖLE FÜR BRENNKRAFTMASCHINEN

Title (fr)

HUILES DE MOTEUR ZERO PHOSPHORE, SANS ZINC A PERFORMANCE ELEVEE DESTINEES AUX MOTEURS THERMIQUES

Publication

EP 1664251 A1 20060607 (EN)

Application

EP 04780575 A 20040810

Priority

- US 2004025765 W 20040810
- US 49723403 P 20030822
- US 89359904 A 20040716

Abstract (en)

[origin: US2005043191A1] A substantially zinc and phosphorous free lubricating oil meeting engine performance requirements contain an additive system containing metal detergents, at least one borated ashless dispersant, at least an amine antioxidant and a trinuclear molybdenum compound. The lubricant contains a minimum of 120 ppm boron and a minimum of 80 ppm molybdenum.

IPC 1-7

C10M 163/00

IPC 8 full level

C10M 161/00 (2006.01); **C10M 169/04** (2006.01)

CPC (source: EP KR US)

C10M 161/00 (2013.01 - EP KR US); **C10M 163/00** (2013.01 - EP US); **C10M 169/00** (2013.01 - KR); **C10M 169/04** (2013.01 - KR); **C10M 169/044** (2013.01 - EP US); **C10M 2207/021** (2013.01 - EP US); **C10M 2207/024** (2013.01 - EP US); **C10M 2207/027** (2013.01 - EP US); **C10M 2207/124** (2013.01 - EP US); **C10M 2215/062** (2013.01 - EP US); **C10M 2215/064** (2013.01 - EP US); **C10M 2215/065** (2013.01 - EP US); **C10M 2215/28** (2013.01 - EP US); **C10M 2219/044** (2013.01 - EP US); **C10M 2219/066** (2013.01 - EP US); **C10M 2219/08** (2013.01 - EP US); **C10M 2219/087** (2013.01 - EP US); **C10M 2219/108** (2013.01 - EP US); **C10M 2223/045** (2013.01 - EP US); **C10M 2227/09** (2013.01 - EP US); **C10M 2229/02** (2013.01 - EP US); **C10N 2010/04** (2013.01 - EP US); **C10N 2010/12** (2013.01 - EP US); **C10N 2030/06** (2013.01 - EP US); **C10N 2030/40** (2020.05 - EP US); **C10N 2030/42** (2020.05 - EP US); **C10N 2030/43** (2020.05 - EP US); **C10N 2040/25** (2013.01 - EP US); **C10N 2060/14** (2013.01 - EP US)

Citation (search report)

See references of WO 2005021693A1

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