Title (en)

LUBRICATING OIL COMPOSITION FOR INTERNAL COMBUSTION ENGINE

Title (de)

SCHMIERÖLZUSAMMENSETZUNG FÜR VERBRENNUNGSMOTOR

Title (fr)

COMPOSITION D'HUILE DE LUBRIFICATION POUR UN MOTEUR A COMBUSTION

Publication

EP 1439217 B1 20120620 (EN)

Application

EP 02770233 A 20021015

Priority

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- JP 2002086145 A 20020326
- JP 2002086146 A 20020326
- JP 2002086147 A 20020326

Abstract (en)

[origin: EP1439217A1] A lubricating oil composition for internal combustion engine, comprising a lubricating base oil; (A) a triphosphate represented by formula (1) below in an amount of 0.01 to 0.2 percent by mass in terms of phosphorus: (B) succinimide and/or derivative thereof in an amount of 0.01 to 0.3 percent by mass in terms of nitrogen; (C) an alkali metal or alkaline earth metal detergent in an amount of 0.05 to 1 percent by mass in terms of metal; and (D) a phenol-based and/or amine-based anti-oxidants in an amount of 0.01 to 3 percent by mass: O = P(OR<1>)3 wherein the groups of R<1> are each independently a hydrocarbon group having 1 to 30 carbon atoms and are the same or different from each other. The lubricating oil composition is excellent in anti-wear properties, base number retaining properties, high temperature detergency, and low friction characteristics.

IPC 8 full level

C10M 163/00 (2006.01); **C10M 129/10** (2006.01); **C10M 133/12** (2006.01); **C10M 133/16** (2006.01); **C10M 133/56** (2006.01); **C10M 135/00** (2006.01); **C10M 137/04** (2006.01); **C10M 159/20** (2006.01); C10N 10/02 (2006.01); C10N 10/04 (2006.01); C10N 30/04 (2006.01); C10N 30/06 (2006.01); C10N 30/08 (2006.01); C10N 40/12 (2006.01); C10N 40/25 (2006.01)

CPC (source: EP US)

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Cited by

EP1829952A4; EP2944682A4; EP2154231A4; GB2444131A; GB2444131B; US8709988B2; US9909083B2; WO2006068203A1; US8071518B2; US8481467B2; EP2675876B1; EP2141220B1

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