

Title (en)

A LOW PHOSPHORUS LUBRICATING OIL COMPOSITION HAVING LEAD CORROSION CONTROL

Title (de)

SCHMIERÖLZUSAMMENSETZUNG MIT GERINGEM PHOSPHORANTEIL UND BLEIKORROSIONSKONTROLLE

Title (fr)

COMPOSITION D'HUILE LUBRIFIANTE DE FAIBLE TENEUR EN PHOSPHORE LIMITANT LA CORROSION DU PLOMB

Publication

EP 2049631 A4 20110914 (EN)

Application

EP 07840789 A 20070808

Priority

- US 2007075507 W 20070808
- US 46353206 A 20060809

Abstract (en)

[origin: US2008039348A1] The present invention provides a low phosphorus lubricating oil composition containing a mixture of zinc dithiophosphates in a certain ratio surprisingly yields improved lead corrosion. The synergistic combination of mixed zinc dithiophosphates containing a zinc primary dialkyl dithiophosphate, zinc secondary dialkyl dithiophosphate and zinc diaryl dithiophosphate in a respective ratio, based on the phosphorus content, of the zinc primary dialkyl dithiophosphate to zinc secondary dialkyl dithiophosphate from about 2:1 to about 1:2 and the ratio of the mixture of zinc primary dialkyl dithiophosphate and zinc secondary dialkyl dithiophosphate to zinc diaryl dithiophosphate from about 6:1 to about 1:1. When used in a lubricating oil composition having a total phosphorus content less than about 0.06 wt %, based on the total weight of the lubricating oil composition to lubricate internal combustion engines. The mixture of zinc dithiophosphates greatly reduces lead corrosion.

IPC 8 full level

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Citation (search report)

- [I] EP 1403359 A1 20040331 - INFINEUM INT LTD [GB]
- [A] EP 0435745 A1 19910703 - NISSAN MOTOR [JP], et al
- See references of WO 2008021901A2

Designated contracting state (EPC)

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DOCDB simple family (publication)

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EP 2049631 B1 20130313; JP 2010500457 A 20100107; JP 5345935 B2 20131120; US 2013137616 A1 20130530;
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