

Title (en)

Lubricant compositions containing thiophosphoric and dithiophosphoric acid esters

Title (de)

Schmierstoffzusammensetzungen mit Thiophosphorsäureestern und Dithiophosphorsäureestern

Title (fr)

Compositions lubrifiantes contenant des esters d'acide thiophosphorique et dithiophosphorique

Publication

EP 0903399 B1 20070214 (DE)

Application

EP 98810894 A 19980909

Priority

CH 220297 A 19970918

Abstract (en)

[origin: EP0903399A1] Lubricating oil contains (a) thiophosphoric ester(s) (I), (b) dithiophosphoric esters or phosphoric thioesters (II) and (c) oil additive(s) (III) selected from polyol partial esters, amines and epoxides. The thiophosphoric esters (I) and dithiophosphoric ester or phosphoric thioesters (II) are of the following formulae: R1, R2, R3 = 3-20 C hydrocarbyl; X = O or S; R1', R2', R3' = optionally substituted 3-20C hydrocarbyl. An Independent claim is also included for a concentrate containing (I), (II) and (III).

IPC 8 full level

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CPC (source: EP KR US)

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Cited by

CN112080333A; EP1529830A1; EP2305782A1; EP2147967A1; US8969267B2; WO2006100188A1; WO2011035865A1; WO201202945A1

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