

Title (en)
Lubricating oil composition

Title (de)
Schmierölszusammensetzung

Title (fr)
Composition d'huile lubrifiante

Publication
EP 0768366 B1 20010613 (EN)

Application
EP 96307382 A 19961010

Priority
JP 28933895 A 19951011

Abstract (en)
[origin: EP0768366A1] Disclosed herein is a lubricating oil composition containing a major portion of a lubricating base oil and a minor portion of additives comprising a zinc di (primary alkyl) dithiophosphate and a zinc di (secondary alkyl) dithiophosphate in proportions to give a weight ratio in phosphorus content of from 20:80 to 80:20, a sulfur compound in a proportion to give a sulfur content of from 300 to 1,200 ppm (weight basis), and an oxymolybdenum sulfide dithiocarbamate or an oxymolybdenum sulfide dithiophosphate in a proportion to give a molybdenum content of from 200 to 2,000 ppm (weight basis). The lubricating oil composition according to the present invention has excellent antiwear properties and even at elevated temperatures and in the presence of nitrogen oxides, exhibits high oxidation resistance and retains good friction-reducing properties, so that it can be suitably used as a lubricating oil for internal combustion engines.

IPC 1-7
C10M 141/10

IPC 8 full level
C10M 169/04 (2006.01); **C10M 141/10** (2006.01); **C10N 10/02** (2006.01); **C10N 10/04** (2006.01); **C10N 10/12** (2006.01); **C10N 10/16** (2006.01); **C10N 30/06** (2006.01); **C10N 30/08** (2006.01); **C10N 30/10** (2006.01); **C10N 30/12** (2006.01); **C10N 40/04** (2006.01); **C10N 40/08** (2006.01); **C10N 40/25** (2006.01)

CPC (source: EP)
C10M 135/04 (2013.01); **C10M 135/06** (2013.01); **C10M 135/08** (2013.01); **C10M 135/18** (2013.01); **C10M 135/22** (2013.01); **C10M 135/28** (2013.01); **C10M 137/10** (2013.01); **C10M 141/10** (2013.01); **C10M 2209/084** (2013.01); **C10M 2215/04** (2013.01); **C10M 2215/086** (2013.01); **C10M 2215/26** (2013.01); **C10M 2215/28** (2013.01); **C10M 2217/046** (2013.01); **C10M 2217/06** (2013.01); **C10M 2219/022** (2013.01); **C10M 2219/024** (2013.01); **C10M 2219/04** (2013.01); **C10M 2219/042** (2013.01); **C10M 2219/044** (2013.01); **C10M 2219/046** (2013.01); **C10M 2219/066** (2013.01); **C10M 2219/068** (2013.01); **C10M 2219/082** (2013.01); **C10M 2219/083** (2013.01); **C10M 2219/086** (2013.01); **C10M 2219/10** (2013.01); **C10M 2219/102** (2013.01); **C10M 2219/104** (2013.01); **C10M 2219/106** (2013.01); **C10M 2223/045** (2013.01); **C10N 2010/02** (2013.01); **C10N 2010/04** (2013.01); **C10N 2010/12** (2013.01)

Cited by
US12006483B2; WO2010142724A1; EP2248877A1; EP2060619A4; CN105567380A; EP2078725A4; US2021032528A1; US11697756B2; US2012103299A1; CN102459540A; EP2949738A1; US2022033725A1; US9593291B2; US8309499B2; US9580666B2; US8211840B2; US8084403B2; WO2013083791A1; US7884059B2; US7960321B2; US1199915B2; US11767596B2; US9574158B2; WO2021021888A1; KR101421310B1; WO2008061079A3; WO2021021891A1; WO2022026434A1

Designated contracting state (EPC)
BE DE ES FR GB IT NL

DOCDB simple family (publication)
EP 0768366 A1 19970416; **EP 0768366 B1 20010613**; AU 6812696 A 19970417; CA 2185716 A1 19970412; DE 69613304 D1 20010719; DE 69613304 T2 20011031; ES 2159692 T3 20011016; JP 3556355 B2 20040818; JP H09104888 A 19970422; SG 63672 A1 19990330

DOCDB simple family (application)
EP 96307382 A 19961010; AU 6812696 A 19961009; CA 2185716 A 19960916; DE 69613304 T 19961010; ES 96307382 T 19961010; JP 28933895 A 19951011; SG 1996010859 A 19961011