

Title (en)

Lubricating oil additives.

Title (de)

Schmierölzusätze.

Title (fr)

Additifs pour huile lubrifiante.

Publication

EP 0465118 A1 19920108 (EN)

Application

EP 91305809 A 19910627

Priority

- GB 9014483 A 19900629
- GB 9014520 A 19900629

Abstract (en)

Alkali metal detergents, particularly sodium-containing detergents, for example, a sodium thiophosphonate, may be used to enhance the action of an antiwear agent, especially a zinc dihydrocarbyl dithiophosphate, in a lubricating oil particularly a crankcase lubricating oil. In particular, low temperature wear as measured by the Peugeot TU3 test may be reduced.

IPC 1-7

C10M 141/10; C10M 163/00

IPC 8 full level

C10M 141/10 (2006.01); **C10M 163/00** (2006.01)

CPC (source: EP)

C10M 129/10 (2013.01); **C10M 135/10** (2013.01); **C10M 135/30** (2013.01); **C10M 137/10** (2013.01); **C10M 137/14** (2013.01);
C10M 141/10 (2013.01); **C10M 159/126** (2013.01); **C10M 159/20** (2013.01); **C10M 159/22** (2013.01); **C10M 159/24** (2013.01);
C10M 163/00 (2013.01); **C10M 2207/023** (2013.01); **C10M 2207/026** (2013.01); **C10M 2207/027** (2013.01); **C10M 2207/028** (2013.01);
C10M 2207/26 (2013.01); **C10M 2207/262** (2013.01); **C10M 2219/044** (2013.01); **C10M 2219/046** (2013.01); **C10M 2219/087** (2013.01);
C10M 2219/088 (2013.01); **C10M 2219/089** (2013.01); **C10M 2223/045** (2013.01); **C10M 2223/065** (2013.01); **C10M 2223/121** (2013.01);
C10M 2225/04 (2013.01); **C10M 2225/041** (2013.01); **C10N 2010/02** (2013.01); **C10N 2010/04** (2013.01); **C10N 2040/25** (2013.01);
C10N 2040/251 (2020.05); **C10N 2040/252** (2020.05); **C10N 2040/253** (2020.05); **C10N 2040/255** (2020.05); **C10N 2040/28** (2013.01);
C10N 2070/02 (2020.05)

Citation (search report)

- [YP] EP 0391651 A2 19901010 - EXXON CHEMICAL PATENTS INC [US]
- [X] DE 1594428 A1 19700730 - EXXON RESEARCH ENGINEERING CO
- [X] GB 2033923 A 19800529 - EXXON RESEARCH ENGINEERING CO
- [X] US 2849398 A 19580826 - MOLLDY LEONARD E, et al
- [Y] GB 2181154 A 19870415 - ELF FRANCE
- [Y] GB 2181151 A 19870415 - ELF FRANCE
- [Y] US 2316080 A 19430406 - LOANE CLARENCE M, et al
- [Y] EP 0208513 A2 19870114 - ETHYL PETROLEUM ADDITIVES INC [US]
- [A] US 2798045 A 19570702 - BUCK FRANK A M, et al

Cited by

US5490945A; EP0652279A1; US5486300A; US5562864A; GB2288815A; US5614480A; US6235688B1; WO9218588A1; WO9323505A1;
WO9218589A1; WO9323504A1; WO9412595A1

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

EP 0465118 A1 19920108; EP 0465118 B1 19951025; DE 69114059 D1 19951130; DE 69114059 T2 19960411

DOCDB simple family (application)

EP 91305809 A 19910627; DE 69114059 T 19910627