

Title (en)  
Lubricating oil additives.

Title (de)  
Schmierölkusätze.

Title (fr)  
Additifs pour huile lubrifiante.

Publication  
**EP 0465118 B1 19951025 (EN)**

Application  
**EP 91305809 A 19910627**

Priority  
• GB 9014483 A 19900629  
• GB 9014520 A 19900629

Abstract (en)  
[origin: EP0465118A1] 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)

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