

Title (en)
LUBRICATING OIL COMPOSITIONS WITH IMPROVED FRICTION PROPERTIES

Title (de)
SCHMIERÖLZUSAMMENSETZUNGEN MIT VERBESSERTEN REIBUNGSEIGENSCHAFTEN

Title (fr)
COMPOSITIONS D'HUILE LUBRIFIANTE A PROPRIETES DE REDUCTION DU FROTTEMENT AMELIOREES

Publication
EP 1481044 A1 20041201 (EN)

Application
EP 03710807 A 20030131

Priority
• US 0302935 W 20030131
• US 35373802 P 20020131
• US 35466203 A 20030130

Abstract (en)
[origin: WO03064572A1] The present invention concerns frictions reducers for use in lubricating oil compositions which comprise certain groups of aromatic compounds, esters, narrow mixtures of base stocks, and/or amorphous polymers such as amorphous olefin copolymers. These compositions can provide substantial reductions in the coefficient of friction and fuel economy improving benefits when admixed to lubricating oils without deleterious effects such as instability, undesirable high viscosities and deposits. In one aspect of the invention, pentaerythritol esters and optionally triol esters are added to lubricating oil compositions to provide reduced friction and improved fuel economy. In a second aspect of the invention, similar results are obtained by adding hydrocarbyl aromatics to a lubricating oil composition containing one or more of Groups II and III base stock. In a third aspect, the invention concerns a lubricating oil composition comprising an amorphous olefin copolymer and one or more of Groups II and III base stock. In a third aspect, the invention concerns a lubricating oil composition comprising an amorphous olefin copolymer and one or more of Groups II and III base stocks. In one embodiment, the third aspect also includes one or more of hydrocarbyl aromatics and polyol esters as part of the composition. In a fourth aspect, moderate concentrations of hydrocarbyl aromatics are used in a lubricating oil composition comprising paraffinic base oil stocks and preferably a borated polyisobutenyl succinimide ashless dispersant.

IPC 1-7
C10M 169/04; **C10M 101/02**; **C10M 107/02**; **C10M 127/06**; **C10M 129/76**; **C10M 133/56**; **C10M 143/00**; **C10N 40/25**; **C10N 60/14**

IPC 8 full level
C10M 105/38 (2006.01); **C10M 107/02** (2006.01); **C10M 111/02** (2006.01); **C10M 111/04** (2006.01); **C10M 127/06** (2006.01); **C10M 141/06** (2006.01); **C10M 169/04** (2006.01)

CPC (source: EP KR US)
C10M 105/38 (2013.01 - EP US); **C10M 107/02** (2013.01 - EP US); **C10M 111/02** (2013.01 - EP US); **C10M 111/04** (2013.01 - EP US); **C10M 127/06** (2013.01 - EP US); **C10M 139/00** (2013.01 - KR); **C10M 141/06** (2013.01 - EP US); **C10M 169/04** (2013.01 - EP US); **C10M 169/041** (2013.01 - EP US); **C10M 169/044** (2013.01 - EP US); **C10M 2201/10** (2013.01 - EP US); **C10M 2203/06** (2013.01 - EP US); **C10M 2203/065** (2013.01 - EP US); **C10M 2203/10** (2013.01 - EP US); **C10M 2203/1006** (2013.01 - EP US); **C10M 2203/1025** (2013.01 - EP US); **C10M 2205/02** (2013.01 - EP US); **C10M 2205/0206** (2013.01 - EP US); **C10M 2205/0225** (2013.01 - EP US); **C10M 2205/0245** (2013.01 - EP US); **C10M 2205/028** (2013.01 - EP US); **C10M 2205/0285** (2013.01 - EP US); **C10M 2205/163** (2013.01 - EP US); **C10M 2205/173** (2013.01 - EP US); **C10M 2205/22** (2013.01 - EP US); **C10M 2205/223** (2013.01 - EP US); **C10M 2207/024** (2013.01 - EP US); **C10M 2207/28** (2013.01 - EP US); **C10M 2207/2805** (2013.01 - EP US); **C10M 2207/283** (2013.01 - EP US); **C10M 2207/2835** (2013.01 - EP US); **C10M 2209/1023** (2013.01 - EP US); **C10M 2215/28** (2013.01 - EP US); **C10M 2219/081** (2013.01 - EP US); **C10M 2219/086** (2013.01 - EP US); **C10N 2020/02** (2013.01 - EP US); **C10N 2020/04** (2013.01 - EP US); **C10N 2030/06** (2013.01 - EP US); **C10N 2030/54** (2020.05 - EP US); **C10N 2040/25** (2013.01 - EP US); **C10N 2060/14** (2013.01 - EP US)

Citation (search report)
See references of WO 03064572A1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT SE SI SK TR

DOCDB simple family (publication)
WO 03064572 A1 20030807; CA 2471886 A1 20030807; EP 1481044 A1 20041201; JP 2006503926 A 20060202; KR 20040077895 A 20040907; MX PA04006250 A 20040927; NZ 533412 A 20060929; US 2003166476 A1 20030904; US 2006079411 A1 20060413

DOCDB simple family (application)
US 0302935 W 20030131; CA 2471886 A 20030131; EP 03710807 A 20030131; JP 2003564169 A 20030131; KR 20047011678 A 20030131; MX PA04006250 A 20030131; NZ 53341203 A 20030131; US 28450905 A 20051122; US 35466203 A 20030130