

Title (en)  
LUBRICANT COMPOSITION CONTAINING MIXED FRICTION MODIFIERS.

Title (de)  
GEMISCHTE REIBUNGSMODIFIZIERMITTEL ENTHALTENDE SCHMIERMITTELZUSAMMENSETZUNG.

Title (fr)  
COMPOSITION DE MATIERE LUBRIFIANTE CONTENANT UN MELANGE D'AGENTS MODIFIANT LE FROTTEMENT.

Publication  
**EP 0638117 A1 19950215 (EN)**

Application  
**EP 93909306 A 19930409**

Priority  
• US 9303378 W 19930409  
• US 86892092 A 19920415

Abstract (en)  
[origin: WO9321289A1] The present invention provides an improved lubricating oil composition for automotive internal combustion engines and transmission which comprises an oil of lubricating viscosity having admixed therewith a minor amount of friction modifier composition which reduces the coefficient of friction between moving mechanical parts, thereby providing for enhanced fuel economy. The friction modifier composition comprises a combination of an alkoxyated hydrocarbyl amine or a boronated derivative thereof and hydrocarbyl phenol sulfide. This combination of components provides for synergistic fuel economy effects particularly when used as components in automotive crankcase lubricants also containing conventional additive packages, which effects are not observed in oil which contains one or the other of these components alone.

IPC 1-7  
**C10M 141/08**; **C10M 141/12**; **C10M 163/00**; **C10M 167/00**

IPC 8 full level  
**C10M 141/08** (2006.01); **C10M 141/12** (2006.01); **C10M 163/00** (2006.01); **C10M 167/00** (2006.01); **C10N 30/06** (2006.01); **C10N 40/04** (2006.01)

CPC (source: EP US)  
**C10M 129/76** (2013.01 - EP); **C10M 133/08** (2013.01 - EP); **C10M 133/12** (2013.01 - EP); **C10M 133/52** (2013.01 - EP);  
**C10M 135/10** (2013.01 - EP); **C10M 135/30** (2013.01 - EP); **C10M 137/10** (2013.01 - EP); **C10M 139/00** (2013.01 - EP);  
**C10M 141/08** (2013.01 - EP US); **C10M 141/12** (2013.01 - EP); **C10M 145/14** (2013.01 - EP); **C10M 145/16** (2013.01 - EP);  
**C10M 155/02** (2013.01 - EP); **C10M 159/24** (2013.01 - EP); **C10M 163/00** (2013.01 - EP); **C10M 167/00** (2013.01 - EP);  
**C10M 2203/06** (2013.01 - EP); **C10M 2205/00** (2013.01 - EP); **C10M 2205/024** (2013.01 - EP); **C10M 2205/026** (2013.01 - EP);  
**C10M 2205/028** (2013.01 - EP); **C10M 2205/06** (2013.01 - EP); **C10M 2205/20** (2013.01 - EP); **C10M 2207/023** (2013.01 - EP);  
**C10M 2207/026** (2013.01 - EP); **C10M 2207/027** (2013.01 - EP); **C10M 2207/028** (2013.01 - EP); **C10M 2207/08** (2013.01 - EP);  
**C10M 2207/123** (2013.01 - EP); **C10M 2207/125** (2013.01 - EP); **C10M 2207/129** (2013.01 - EP); **C10M 2207/144** (2013.01 - EP);  
**C10M 2207/146** (2013.01 - EP); **C10M 2207/16** (2013.01 - EP); **C10M 2207/22** (2013.01 - EP); **C10M 2207/284** (2013.01 - EP);  
**C10M 2207/285** (2013.01 - EP); **C10M 2207/287** (2013.01 - EP); **C10M 2207/288** (2013.01 - EP); **C10M 2207/289** (2013.01 - EP);  
**C10M 2209/084** (2013.01 - EP); **C10M 2209/086** (2013.01 - EP); **C10M 2209/102** (2013.01 - EP); **C10M 2215/04** (2013.01 - EP);  
**C10M 2215/042** (2013.01 - EP); **C10M 2215/06** (2013.01 - EP); **C10M 2215/064** (2013.01 - EP); **C10M 2215/065** (2013.01 - EP);  
**C10M 2215/066** (2013.01 - EP); **C10M 2215/067** (2013.01 - EP); **C10M 2215/068** (2013.01 - EP); **C10M 2215/24** (2013.01 - EP);  
**C10M 2215/26** (2013.01 - EP); **C10M 2217/046** (2013.01 - EP); **C10M 2217/06** (2013.01 - EP); **C10M 2219/022** (2013.01 - EP);  
**C10M 2219/044** (2013.01 - EP); **C10M 2219/046** (2013.01 - EP); **C10M 2219/068** (2013.01 - EP); **C10M 2219/086** (2013.01 - EP);  
**C10M 2219/087** (2013.01 - EP); **C10M 2219/088** (2013.01 - EP); **C10M 2219/089** (2013.01 - EP); **C10M 2223/045** (2013.01 - EP);  
**C10M 2223/12** (2013.01 - EP); **C10M 2225/04** (2013.01 - EP); **C10M 2225/041** (2013.01 - EP); **C10M 2227/00** (2013.01 - EP);  
**C10M 2227/06** (2013.01 - EP); **C10M 2227/061** (2013.01 - EP); **C10M 2227/062** (2013.01 - EP); **C10M 2227/063** (2013.01 - EP);  
**C10M 2227/065** (2013.01 - EP); **C10M 2227/066** (2013.01 - EP); **C10M 2227/09** (2013.01 - EP); **C10M 2229/02** (2013.01 - EP);  
**C10M 2229/04** (2013.01 - EP); **C10M 2229/041** (2013.01 - EP); **C10M 2229/042** (2013.01 - EP); **C10M 2229/043** (2013.01 - EP);  
**C10M 2229/044** (2013.01 - EP); **C10M 2229/045** (2013.01 - EP); **C10M 2229/046** (2013.01 - EP); **C10M 2229/047** (2013.01 - EP);  
**C10M 2229/048** (2013.01 - EP); **C10M 2229/05** (2013.01 - EP); **C10M 2229/051** (2013.01 - EP); **C10M 2229/052** (2013.01 - EP);  
**C10M 2229/053** (2013.01 - EP); **C10M 2229/054** (2013.01 - EP); **C10N 2010/02** (2013.01 - EP); **C10N 2010/04** (2013.01 - EP);  
**C10N 2010/08** (2013.01 - EP); **C10N 2010/14** (2013.01 - EP US); **C10N 2010/16** (2013.01 - EP US); **C10N 2040/08** (2013.01 - EP);  
**C10N 2040/25** (2013.01 - EP); **C10N 2040/251** (2020.05 - EP); **C10N 2040/252** (2020.05 - EP); **C10N 2040/253** (2020.05 - EP);  
**C10N 2040/255** (2020.05 - EP); **C10N 2040/28** (2013.01 - EP)

C-Set (source: EP)  
1. **C10M 141/08 + C10M 133/08 + C10M 135/30**  
2. **C10M 141/12 + C10M 135/30 + C10M 139/00**  
3. **C10M 163/00 + C10M 129/76 + C10M 133/08 + C10M 133/12 + C10M 133/52 + C10M 135/30 + C10M 137/10 + C10M 139/00 + C10M 159/24**  
4. **C10M 167/00 + C10M 129/76 + C10M 133/08 + C10M 133/12 + C10M 133/52 + C10M 135/10 + C10M 135/30 + C10M 137/10 + C10M 139/00 + C10M 145/14 + C10M 145/16 + C10M 155/02 + C10M 159/24**

Citation (search report)  
See references of WO 9321289A1

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

DOCDB simple family (publication)  
**WO 9321289 A1 19931028**; AU 3976993 A 19931118; CA 2132523 A1 19931028; CA 2132523 C 19990803; EP 0638117 A1 19950215; JP H07508049 A 19950907; MX 9302130 A 19940531

DOCDB simple family (application)  
**US 9303378 W 19930409**; AU 3976993 A 19930409; CA 2132523 A 19930409; EP 93909306 A 19930409; JP 51851693 A 19930409; MX 9302130 A 19930413