

Title (en)
LUBRICATING OIL COMPOSITION FOR WET CLUTCH OR WET BRAKE.

Title (de)
SCHMIERÖLZUSAMMENSETZUNG FÜR FEUCHTE KUPPLUNGEN ODER FEUCHTE BREMSSEN.

Title (fr)
HUILE LUBRIFIANTE POUR EMBRAYAGES OU FREINS A DISQUE HUMIDE.

Publication
EP 0622444 A1 19941102 (EN)

Application
EP 94908130 A 19930818

Priority
• JP 9301155 W 19930818
• JP 21920092 A 19920818

Abstract (en)
A lubricating oil composition for wet clutches or wet brakes, which comprises a base oil and an inorganic phosphorus compound which may contain sulfur and/or oxygen atom(s) as the constituent element(s) or an amine salt of said compound, or which comprises a base oil, said inorganic phosphorus compound or amine salt thereof, and further an organic polyol compound having at least two hydroxyl groups in its molecule. This composition realizes excellent friction characteristics in wet clutches and brakes, in particular, a high μ_d (coefficient of kinetic friction) and a high μ_s (coefficient of static friction), a satisfactory suppression of vibration in lock-up clutches, an excellent persistence of the effect of vibration suppression, and the temperature-independency of the coefficients of friction. Hence this composition is useful as shock absorber oil, power steering oil, hydraulic suspension oil and so forth.

Abstract (fr)
Huile lubrifiante pour embrayages ou freins à disque humide, comprenant une huile de base et un composé de phosphore inorganique pouvant contenir du soufre et/ou un ou plusieurs atomes d'oxygène comme élément(s) constitutif(s), ou un sel d'amine de ce composé, ou comprenant une huile de base, ledit composé de phosphore inorganique ou un sel d'amine de ce composé, ainsi qu'un composé de polyol organique dont la molécule comporte au moins deux groupes hydroxyle. Cette composition destinée aux embrayages ou freins à disque humide présente d'excellentes caractéristiques de friction, et notamment un coefficient de friction cinétique (μ_d) et un coefficient de friction statique (μ_s) élevés, une suppression satisfaisante de vibrations dans les mécanismes de verrouillage, et une excellente persistance de l'effet de suppression de vibrations, les coefficients de friction étant indépendants de la température. Cette huile peut être utilisée dans des organes amortisseurs, de direction assistée, de suspension hydraulique, etc.

IPC 1-7
C10M 125/24; **C10M 141/02**; **C10M 129/08**; **C10N 40/04**; **C10N 40/08**

IPC 8 full level
C10M 125/24 (2006.01); **C10M 141/02** (2006.01); **C10M 141/06** (2006.01); **C10M 167/00** (2006.01)

CPC (source: EP)
C10M 125/24 (2013.01); **C10M 129/08** (2013.01); **C10M 129/10** (2013.01); **C10M 129/40** (2013.01); **C10M 129/76** (2013.01); **C10M 133/08** (2013.01); **C10M 133/44** (2013.01); **C10M 133/46** (2013.01); **C10M 133/56** (2013.01); **C10M 135/06** (2013.01); **C10M 141/02** (2013.01); **C10M 141/06** (2013.01); **C10M 145/14** (2013.01); **C10M 155/02** (2013.01); **C10M 159/22** (2013.01); **C10M 167/00** (2013.01); **C10M 2201/085** (2013.01); **C10M 2203/06** (2013.01); **C10M 2205/00** (2013.01); **C10M 2205/026** (2013.01); **C10M 2207/022** (2013.01); **C10M 2207/023** (2013.01); **C10M 2207/024** (2013.01); **C10M 2207/026** (2013.01); **C10M 2207/027** (2013.01); **C10M 2207/028** (2013.01); **C10M 2207/125** (2013.01); **C10M 2207/126** (2013.01); **C10M 2207/129** (2013.01); **C10M 2207/144** (2013.01); **C10M 2207/146** (2013.01); **C10M 2207/262** (2013.01); **C10M 2207/281** (2013.01); **C10M 2207/282** (2013.01); **C10M 2207/283** (2013.01); **C10M 2207/286** (2013.01); **C10M 2207/287** (2013.01); **C10M 2207/288** (2013.01); **C10M 2207/289** (2013.01); **C10M 2209/00** (2013.01); **C10M 2209/02** (2013.01); **C10M 2209/084** (2013.01); **C10M 2209/10** (2013.01); **C10M 2209/103** (2013.01); **C10M 2215/04** (2013.01); **C10M 2215/042** (2013.01); **C10M 2215/06** (2013.01); **C10M 2215/064** (2013.01); **C10M 2215/065** (2013.01); **C10M 2215/08** (2013.01); **C10M 2215/082** (2013.01); **C10M 2215/086** (2013.01); **C10M 2215/22** (2013.01); **C10M 2215/221** (2013.01); **C10M 2215/223** (2013.01); **C10M 2215/224** (2013.01); **C10M 2215/225** (2013.01); **C10M 2215/226** (2013.01); **C10M 2215/26** (2013.01); **C10M 2215/28** (2013.01); **C10M 2215/30** (2013.01); **C10M 2217/046** (2013.01); **C10M 2217/06** (2013.01); **C10M 2219/024** (2013.01); **C10M 2219/044** (2013.01); **C10M 2219/046** (2013.01); **C10M 2219/062** (2013.01); **C10M 2219/068** (2013.01); **C10M 2219/082** (2013.01); **C10M 2219/085** (2013.01); **C10M 2219/089** (2013.01); **C10M 2223/045** (2013.01); **C10M 2227/061** (2013.01); **C10M 2229/02** (2013.01); **C10M 2229/04** (2013.01); **C10M 2229/041** (2013.01); **C10M 2229/042** (2013.01); **C10M 2229/043** (2013.01); **C10M 2229/044** (2013.01); **C10M 2229/045** (2013.01); **C10M 2229/046** (2013.01); **C10M 2229/047** (2013.01); **C10M 2229/048** (2013.01); **C10M 2229/05** (2013.01); **C10M 2229/051** (2013.01); **C10M 2229/052** (2013.01); **C10M 2229/053** (2013.01); **C10M 2229/054** (2013.01); **C10N 2010/04** (2013.01); **C10N 2040/00** (2013.01); **C10N 2040/04** (2013.01); **C10N 2040/042** (2020.05); **C10N 2040/044** (2020.05); **C10N 2040/046** (2020.05); **C10N 2040/06** (2013.01); **C10N 2040/30** (2013.01); **C10N 2040/32** (2013.01); **C10N 2040/34** (2013.01); **C10N 2040/36** (2013.01); **C10N 2040/38** (2020.05); **C10N 2040/40** (2020.05); **C10N 2040/42** (2020.05); **C10N 2040/44** (2020.05); **C10N 2040/50** (2020.05)

Cited by
US6121209A; US5972851A; EP1518919A1; EP1739321A3; EP0769546A3; EP0761805A3; EP0747464A1; US5858929A; AU711001B2; AU711001C; AU697033B2; US5773392A; AU693624B2; US6528458B1; DE102008043231A1; WO0073406A1; US6251840B1; WO2011131614A1; DE102010028168A1; WO9617912A1; WO9617914A1; KR100239817B1

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

DOCDB simple family (publication)
WO 9404637 A1 19940303; DE 69327453 D1 20000203; DE 69327453 T2 20000511; DE 69327453 T3 20040701; EP 0622444 A1 19941102; EP 0622444 A4 19950215; EP 0622444 B1 19991229; EP 0622444 B2 20031022

DOCDB simple family (application)
JP 9301155 W 19930818; DE 69327453 T 19930818; EP 94908130 A 19930818