

Title (en)

LUBRICANT OIL COMPOSITION AND INTERNAL-COMBUSTION-ENGINE FRICTION REDUCTION METHOD

Title (de)

SCHMIERÖLZUSAMMENSETZUNG UND REIBUNGSVERRINGERUNGSVERFAHREN FÜR BRENNKRAFTMASCHINE

Title (fr)

COMPOSITION D'HUILE LUBRIFIANTE ET PROCÉDÉ DE RÉDUCTION DE FROTTEMENT DE MOTEUR À COMBUSTION INTERNE

Publication

EP 3279292 A4 20180822 (EN)

Application

EP 16772852 A 20160329

Priority

- JP 2015074366 A 20150331
- JP 2016060168 W 20160329

Abstract (en)

[origin: WO2016158971A1] The present invention provides a lubricant oil composition having an excellent friction reduction effect and excellent fuel saving properties. Provided is a lubricant oil composition comprising (A) a lubricant-oil base oil, (B) a molybdenum compound, and (C) an ashless friction modifier, wherein said (B) molybdenum compound contains a binuclear organic molybdenum compound represented by formula (I), the content of the binuclear organic molybdenum compound in terms of molybdenum atoms being 0.030-0.140 mass%, inclusive, on the basis of the total amount of the lubricant oil composition; as said (C) ashless friction modifier, (C1) an ester ashless friction modifier and/or (C2) an amine ashless friction modifier is contained; and the total of the contents of said (C1) ester ashless friction modifier and said (C2) amine ashless friction modifier exceeds 0.1 mass% but is not more than 1.8 mass% on the basis of the total amount of the lubricant oil composition. (I) (In formula (I), R1 to R4 each represent a hydrocarbon group having a carbon number of 4-22, and R1 to R4 may be identical or different. X1 to X4 each represent a sulfur atom or an oxygen atom.)

IPC 8 full level

C10M 141/12 (2006.01); **C10M 101/02** (2006.01); **C10M 107/02** (2006.01); **C10M 129/68** (2006.01); **C10M 129/76** (2006.01); **C10M 133/04** (2006.01); **C10M 135/18** (2006.01); **C10M 137/10** (2006.01); **C10M 139/00** (2006.01); **C10M 141/08** (2006.01); **C10M 145/14** (2006.01); **C10N 10/04** (2006.01); **C10N 10/12** (2006.01); **C10N 30/00** (2006.01); **C10N 30/06** (2006.01); **C10N 40/25** (2006.01)

CPC (source: EP KR US)

C10M 129/76 (2013.01 - KR US); **C10M 139/00** (2013.01 - US); **C10M 141/08** (2013.01 - EP KR US); **C10M 141/12** (2013.01 - EP KR US); **C10M 2203/1025** (2013.01 - EP US); **C10M 2205/0285** (2013.01 - EP US); **C10M 2207/026** (2013.01 - EP KR US); **C10M 2207/28** (2013.01 - EP US); **C10M 2207/283** (2013.01 - KR US); **C10M 2207/289** (2013.01 - EP KR US); **C10M 2209/084** (2013.01 - EP KR US); **C10M 2215/02** (2013.01 - EP US); **C10M 2215/042** (2013.01 - EP KR US); **C10M 2215/064** (2013.01 - EP KR US); **C10M 2215/28** (2013.01 - EP US); **C10M 2219/068** (2013.01 - EP KR US); **C10M 2223/045** (2013.01 - EP US); **C10M 2227/00** (2013.01 - US); **C10M 2227/066** (2013.01 - EP US); **C10N 2010/04** (2013.01 - EP US); **C10N 2010/12** (2013.01 - EP US); **C10N 2030/04** (2013.01 - US); **C10N 2030/06** (2013.01 - EP US); **C10N 2030/54** (2020.05 - US); **C10N 2030/68** (2020.05 - EP US); **C10N 2040/25** (2013.01 - EP KR US)

C-Set (source: EP US)

EP

1. **C10M 2203/1025 + C10N 2020/02**
2. **C10M 2215/28 + C10N 2060/14**

US

1. **C10M 2215/28 + C10N 2060/14**
2. **C10M 2203/1025 + C10N 2020/02**

Citation (search report)

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- [X] WO 2014021350 A1 20140206 - IDEMITSU KOSAN CO [JP] & EP 2883946 A1 20150617 - IDEMITSU KOSAN CO [JP]
- [X] EP 2080798 A1 20090722 - IDEMITSU KOSAN CO [JP]
- [A] WO 2012071185 A2 20120531 - CHEVRON ORONITE CO [US], et al
- See also references of WO 2016158971A1

Designated contracting state (EPC)

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US 201615318559 A 20160329; CN 201680001679 A 20160329; EP 16772852 A 20160329; JP 2015074366 A 20150331; JP 2016060168 W 20160329; KR 20177018254 A 20160329