

Title (en)

LUBRICATING COMPOSITIONS AND METHODS OF OPERATING AN INTERNAL COMBUSTION ENGINE

Title (de)

SCHMIERZUSAMMENSETZUNGEN UND VERFAHREN ZUM BETRIEB EINER BRENNKRAFTMASCHINE

Title (fr)

COMPOSITIONS LUBRIFIANTES ET PROCÉDÉS DE FONCTIONNEMENT D'UN MOTEUR À COMBUSTION INTERNE

Publication

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Application

EP 20803320 A 20200923

Priority

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- US 2020052265 W 20200923

Abstract (en)

[origin: WO2021061808A1] The instant disclosure generally relates to lubricating compositions having an oil of lubricating viscosity, a mixture of boron-containing and boron-free dispersants, an overbased magnesium-based detergent, an overbased calcium-based detergent, an ashless friction modifier, and, optionally, other performance additives. The instant lubricating compositions may improve one or more of cleanliness, TBN retention, fuel economy and low-speed preignition ("LSPI").

IPC 8 full level

C10M 141/10 (2006.01); **C10M 141/06** (2006.01)

CPC (source: CN EP KR US)

C10M 141/06 (2013.01 - CN EP KR); **C10M 141/10** (2013.01 - CN EP KR); **C10M 169/04** (2013.01 - US); **C10M 169/048** (2013.01 - CN); **C10M 2203/1006** (2013.01 - US); **C10M 2203/1025** (2013.01 - CN EP KR); **C10M 2205/0285** (2013.01 - EP KR); **C10M 2205/04** (2013.01 - CN); **C10M 2205/06** (2013.01 - CN); **C10M 2207/028** (2013.01 - EP KR US); **C10M 2207/262** (2013.01 - CN EP KR US); **C10M 2207/283** (2013.01 - CN); **C10M 2215/04** (2013.01 - CN); **C10M 2215/086** (2013.01 - CN); **C10M 2215/28** (2013.01 - CN EP KR US); **C10M 2219/022** (2013.01 - CN); **C10M 2219/046** (2013.01 - CN EP KR US); **C10M 2219/068** (2013.01 - CN EP KR); **C10M 2227/061** (2013.01 - CN); **C10N 2010/04** (2013.01 - KR US); **C10N 2010/06** (2013.01 - US); **C10N 2020/02** (2013.01 - US); **C10N 2030/04** (2013.01 - CN EP KR US); **C10N 2030/06** (2013.01 - US); **C10N 2030/45** (2020.05 - US); **C10N 2030/52** (2020.05 - CN EP KR US); **C10N 2030/54** (2020.05 - CN EP KR US); **C10N 2040/255** (2020.05 - CN EP KR US); **C10N 2060/14** (2013.01 - KR)

Citation (search report)

See references of WO 2021061808A1

Designated contracting state (EPC)

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Designated extension state (EPC)

BA ME

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DOCDB simple family (application)

US 2020052265 W 20200923; AU 2020353006 A 20200923; BR 112022005685 A 20200923; CA 3152564 A 20200923; CN 202080066885 A 20200923; EP 20803320 A 20200923; KR 20227010634 A 20200923; US 202017763947 A 20200923