

Title (en)
Lubricating oil composition for automobile engine lubrication

Title (de)
Schmierölzusammensetzung für die Schmierung eines Automotors

Title (fr)
Composition d'huile lubrifiante pour la lubrification d'un moteur automobile

Publication
EP 2636725 A1 20130911 (EN)

Application
EP 13157940 A 20130306

Priority
JP 2012051849 A 20120308

Abstract (en)
Provided is a lubricating oil composition that is highly fuel-efficient and has high wear resistance and is particularly suited for lubrication of a motorcycle four-cycle gasoline engine or a diesel engine vehicle having an exhaust gas after-treatment device. The lubricating oil composition, which is a lubricating oil composition having an SAE viscosity grade of 5W20, comprises a base oil and predetermined amounts of additive components comprising of a nitrogen-containing ash-free dispersant, an alkali earth metal-containing detergent, a phosphorus-containing anti-wear agent, an antioxidant, and a viscosity index-improving agent, wherein the viscosity index is within a range of 140 to 230, the high-shear viscosity at 150°C is 2.9 mPa·s or higher, and the NOACK evaporation loss is 13% or less.

IPC 8 full level
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CPC (source: EP KR US)
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Citation (applicant)
• JP H06306384 A 19941101 - KYOSEKI SEIHIN GIJUTSU KEN
• JP 2003505533 A 20030212
• JP 2000087070 A 20000328 - NIPPON MITSUBISHI OIL CORP

Citation (search report)
• [A] WO 2011115265 A1 20110922 - IDEMITSU KOSAN CO [JP], et al & US 2013029892 A1 20130131 - YAMADA RYOU [JP]
• [A] US 5863873 A 19990126 - BOVINGTON CHARLES HERBERT [GB]
• [I] US 2009163393 A1 20090625 - BOFFA ALEXANDER B [US], et al
• [A] TAYLOR ET AL: "Improved fuel efficiency by lubricant design: A review", PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS, PART J.JOURNAL OF ENGINEERING TRIBOLOGY, MECHANICAL ENGINEERING PUBLICATIONS, BURY ST. EDMUNDS, GB, vol. 214, no. 1, 1 January 2000 (2000-01-01), pages 1 - 15, XP009169924, ISSN: 1350-6501

Cited by
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