

Title (en)
Lubricating oil composition for internal combustion engine

Title (de)
Schmierölszusammensetzung für einen Verbrennungsmotor

Title (fr)
Composition d'huile lubrifiante pour moteur à combustion interne

Publication
EP 2133406 B1 20110817 (EN)

Application
EP 09162272 A 20090609

Priority
JP 2008150903 A 20080609

Abstract (en)
[origin: EP2133406A1] A lubricating oil composition for internal combustion engines contains: base oil; (A) a boronated product of a polyalkenyl succinimide compound; (B) molybdenum dithiocarbamate; and (C) zinc dialkyldithiophosphate. The component (A) is a boronated product of a succinimide compound represented by the following formula (1), and the succinimide compound is obtained by reacting (a) a succinic acid or its anhydride substituted by a polyalkenyl group with (b) polyalkylene polyamine of which 5 mol% or more of the entirety has a ring structure at its terminal. B/N ratio thereof is 0.5 or more, and a content of the component (A) is 0.01 to 0.1 mass% of the total amount of the composition in terms of boron. The component (B) is MoDTC represented by the following formula (2), and a content of the component (B) is 0.01 to 0.08 mass% of the total amount of the composition in terms of Mo. A content of the component (C) is 0.01 to 0.09 mass% of the total amount of the composition in terms of phosphorus. Each symbol in the above formulae means the same as described in the description.

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Cited by
EP2578669A4; CN105733768A; US2023122231A1; EP2550346A4; CN107949628A; EP3279292A4; US10947475B2; WO2013096285A1; US9546340B2; US9896638B2; US11268044B2; EP2966153B1

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