

Title (en)  
LUBRICANTS CONTAINING A BIMETALLIC DETERGENT SYSTEM AND A METHOD OF REDUCING NO<sub>x</sub>? EMISSIONS EMPLOYING SAME

Title (de)  
SCHMIERMITTEL ENTHALTEND EIN BIMETALLISCHES DETERGENZ-SYSTEM UND DIESES VERWENDENDE VERFAHREN ZUR REDUZIERUNG VON NO<sub>x</sub> EMISSIONEN

Title (fr)  
LUBRIFIANTS CONTENANT UN SYSTEME DETERGENT BIMETALLIQUE ET PROCEDE PERMETTANT DE REDUIRE LES EMISSIONS D'OXYDE D'AZOTE (NO<sub>x</sub>?)

Publication  
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Application  
**EP 00986338 A 20001213**

Priority  
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• US 17091099 P 19991215

Abstract (en)  
[origin: WO0144419A1] A lubricating oil composition comprising a major amount of an oil of lubricating viscosity and an additive system comprising (A) from about 0.1 to about 5 % by weight of a detergent composition comprising at least two metal overbased compositions wherein said detergent composition consists essentially of (A-1) at least one alkali metal overbased detergent and (A-2) at least one calcium overbased detergent, wherein the ratio of total base number on a per 100 TBN and diluent-free basis contributed by the alkali metal detergent to the total base number contributed by the calcium detergent ranges from about 99.5-20 to about 0.5-80; (B) from about 1 to about 10 % by weight of a succinimide dispersant; and (C) from about 0.1 to about 5 % by weight of a metal dihydrocarbyl dithiophosphate of the formula (I) wherein R<1> and R<2> are each, independently, hydrocarbyl groups containing from 3 to 13 carbon atoms, M is a metal and n is an integer equal to the valence of M. Also disclosed are methods for cleaning the combustion chamber of internal combustion engines, a method for reducing fuel consumption of internal combustion engines and a method for reducing NO<sub>x</sub> emissions of internal combustion engines.

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IPC 8 full level  
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