

Title (en)
IMPROVED ANTI-WEAR PERFORMANCE OF LUBRICANTS USING CARBON NANOPLAQUELETS

Title (de)
VERBESSERTE VERSCHLEISSSCHUTZLEISTUNG VON SCHMIERMITTELN UNTER VERWENDUNG VON KOHLENSTOFFNANOPLAQUELETS

Title (fr)
PERFORMANCE ANTI-USURE AMÉLIORÉE DE LUBRIFIANTS À L'AIDE DE NANOPLAQUELETS DE CARBONE

Publication
EP 2880136 A1 20150610 (EN)

Application
EP 13745282 A 20130723

Priority
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• US 2013051592 W 20130723

Abstract (en)
[origin: US2014038862A1] Provided are a lubricating engine oil and a method of improving wear protection in an engine lubricated with such lubricating oil. The method includes using as the lubricating oil a formulated oil comprising a lubricating oil base stock as a major component, an antiwear additive as a first minor component, and carbon nanoplaquelets as a second minor component. The carbon nanoplaquelets are dispersed in said lubricating oil base stock. Wear protection is improved as compared to wear protection achieved using a lubricating oil not containing carbon nanoplaquelets as a second minor component. A synergy exists between carbon nanoplaquelets and other major components of lubricants, especially with zinc dialkyldithiophosphate (ZDDP) or other phosphate antiwear additives, that helps to form a nano-composite wear resistant and low friction tribofilm both on ferrous and non-ferrous surfaces (e.g., carbon coatings, ceramic coatings, polymeric coatings, and the like) of engines/machines.

IPC 8 full level
C10M 125/02 (2006.01)

CPC (source: EP US)
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C10M 2223/045 (2013.01 - EP US); **C10N 2020/06** (2013.01 - EP US); **C10N 2030/02** (2013.01 - EP US); **C10N 2030/06** (2013.01 - EP US);
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Citation (search report)
See references of WO 2014025523A1

Cited by
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