

Title (en)
LUBRICATING OIL COMPOSITION

Title (de)
SCHMIERÖLZUSAMMENSETZUNG

Title (fr)
COMPOSITION D'HUILE DE GRAISSAGE

Publication
EP 2337831 A4 20120523 (EN)

Application
EP 09818309 A 20090925

Priority
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Abstract (en)
[origin: US2010081591A1] A lubricating oil composition comprising (a) a major amount of an oil of lubricating viscosity, (b) an ashless dispersant, (c) at least one metal-containing detergent, (d) an antioxidant, and (e) an anti-wear agent, wherein the lubricating oil composition is free of any zinc dialkyl dithiophosphate compound and is substantially free of any phosphorus content is disclosed.

IPC 8 full level

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Citation (search report)

- [X] US 2008139429 A1 20080612 - GUNTHER GREGORY H [US]
- [X] US 2006009366 A1 20060112 - SANT PETER [GB], et al
- [X] US 2007111905 A1 20070517 - VAN DAM WILLEM [US]
- [X] EP 0280580 A2 19880831 - EXXON CHEMICAL PATENTS INC [US]
- [X] WO 9510584 A1 19950420 - KHORRAMIAN BEHROOZ [US]
- [X] US 2005043191 A1 20050224 - FARNG L OSCAR [US], et al
- See references of WO 2010039604A2

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