

Title (en)

Additive composition for transmission oil containing hydrated alkali metal borate and hexagonal boron nitride

Title (de)

Hydratisiertes Alkalimetallborat und hexagonales Bornitrid enthaltende Additivzusammensetzung für Getriebeöle

Title (fr)

Composition d'additifs pour huile de transmission contenant du borate de metal alcalin hydraté et du nitrure de bore hexagonal

Publication

**EP 1386956 A1 20040204 (EN)**

Application

**EP 02291928 A 20020730**

Priority

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Abstract (en)

Disclosed are additive compositions for transmission oils comprising an oil dispersion of a hydrated alkali metal borate and an oil dispersion of hexagonal boron nitride, as well as lubricating oil compositions containing the same.

IPC 1-7

**C10M 125/26**

IPC 8 full level

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CPC (source: EP US)

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Citation (search report)

- [DA] US 3313727 A 19670411 - PEELER ROBERT L
- [DA] US 4787993 A 19881129 - NAGAHIRO TAIZO [JP]
- [A] US 2156803 A 19390502 - COOPER HUGH S, et al
- [A] US 5154839 A 19921013 - HANANO TAKASHI [JP]
- [A] DATABASE WPI Section Ch Week 199909, Derwent World Patents Index; Class E36, AN 1999-101378, XP002225737
- [A] DATABASE WPI Section Ch Week 198834, Derwent World Patents Index; Class A97, AN 1988-239233, XP002225738
- [A] DATABASE WPI Section Ch Week 200053, Derwent World Patents Index; Class A60, AN 2000-567428, XP002225739

Cited by

CN111979026A; EP1535987A1; WO2011046524A1; WO2005059068A3

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