

Title (en)
LUBRICANT CONTAINING THIADIAZOLE DERIVATIVES

Title (de)
SCHMIERMITTEL MIT THIADIAZOLDERIVATEN

Title (fr)
LUBRIFIANT CONTENANT DES DÉRIVÉS DE THIADIAZOLE

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Abstract (en)

The present invention describes a lubricating composition comprising a) a major part of a base oil of lubricating viscosity wherein the base oil is selected from API Group I, II, III, IV, V, or mixtures thereof,b) a total of 0.001 to 0.536 wt.%, based on the total lubricating composition, of one or more monohydrocarbyl-substituted dimercaptothiadiazole derivative(s) according to Formula (I), or a tautomer or salt thereof, belowwherein R is methyl or C₂-to C₄alkyl,wherein the total lubricating composition has a sulfur content of up to 2,500 ppm (wt.),c) less than 0.1 wt% phosphite.The invention further describes the use of the lubricating composition according to the invention for lubricating a driveline, a transmission, in particular a manual or automated transmission, a gear, an automated gear, or an axle, and for enhanced FZG test performance. The invention further relates to a method for preparing the lubricating composition of the invention.

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Citation (applicant)

- US 2016168505 A1 20160616 - BOUVIER GOULVEN [FR], et al
- US 7897696 B2 20110301 - HUANG CHENTE [US], et al
- US 4234435 A 19801118 - MEINHARDT NORMAN A, et al
- US 4152499 A 19790501 - BOERZEL PAUL [DE], et al
- US 5739355 A 19980414 - GATEAU PATRICK [FR], et al
- US 3634515 A 19720111 - PIASEK EDMUND J, et al
- US 7645726 B2 20100112 - LOPER JOHN T [US]
- US 7214649 B2 20070508 - LOPER JOHN T [US], et al
- US 8048831 B2 20111101 - LOPER JOHN T [US]
- US 5334321 A 19940802 - HARRISON JAMES J [US], et al
- US 6723685 B2 20040420 - HARTLEY ROLFE J [US], et al
- US 6300291 B1 20011009 - HARTLEY ROLFE J [US], et al
- US 7732390 B2 20100608 - KADKHODAYAN ABBAS [US], et al
- US 2012101017 A1 20120426 - DUGGAL AKHILESH [US]
- US 4029588 A 19770614 - KOCH FREDERICK WILLIAM
- "FUELS AND LUBRICANTS HANDBOOK, TECHNOLOGY, PROPERTIES, PERFORMANCE, AND TESTING", 2003, ASTM INTERNATIONAL

Citation (search report)

- [X] US 5656577 A 19970812 - KATO TOMOHIRO [JP], et al
- [X] US 5585338 A 19961217 - BELTZER MORTON [US]
- [A] US 5801130 A 19980901 - FRANCISCO MANUAL A [US], et al
- [A] US 2010130390 A1 20100527 - TIPTON CRAIG D [US], et al
- [A] US 2010016189 A1 20100121 - BAKER MARK R [US], et al

Cited by

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