

Title (en)
USE OF A LUBRICATING OIL COMPOSITION

Title (de)
VERWENDUNG EINER SCHMIERÖLZUSAMMENSETZUNG

Title (fr)
UTILISATION D'UNE COMPOSITION D'HUILE LUBRIFIANTE

Publication
EP 2363454 A1 20110907 (EN)

Application
EP 10196988 A 20101224

Priority
• EP 10154430 A 20100223
• EP 10196988 A 20101224

Abstract (en)
A lubricating oil composition comprising: (A) an oil of lubricating viscosity in a major amount, comprising a Group III base stock; (B) as an additive component in a minor amount, a viscosity index improver comprising a linear or star-shaped polymer which is derivable, at least in part, from the polymerisation of one or more conjugated diene monomers; and, wherein the lubricating oil composition is contaminated with at least 0.3 mass %, based on the total mass of the lubricating oil composition, of a biofuel or a decomposition product thereof and mixtures thereof.

IPC 8 full level
C10M 169/04 (2006.01); **C10N 30/10** (2006.01); **C10N 40/25** (2006.01)

CPC (source: EP US)
C10M 169/041 (2013.01 - EP US); **C10M 2203/1025** (2013.01 - EP US); **C10M 2205/022** (2013.01 - EP US); **C10M 2205/024** (2013.01 - EP US); **C10M 2205/04** (2013.01 - EP US); **C10M 2205/06** (2013.01 - EP US); **C10M 2207/028** (2013.01 - EP US); **C10M 2215/064** (2013.01 - EP US); **C10M 2215/26** (2013.01 - EP US); **C10M 2215/28** (2013.01 - EP US); **C10M 2219/046** (2013.01 - EP US); **C10M 2223/045** (2013.01 - EP US); **C10N 2020/073** (2020.05 - EP US); **C10N 2030/10** (2013.01 - EP US); **C10N 2030/42** (2020.05 - EP US); **C10N 2030/52** (2020.05 - EP US); **C10N 2030/78** (2020.05 - EP US); **C10N 2040/252** (2020.05 - EP US); **C10N 2040/255** (2020.05 - EP US); **C10N 2060/02** (2013.01 - EP US)

C-Set (source: EP US)

EP

1. **C10M 2205/022 + C10M 2205/024**
2. **C10M 2205/04 + C10M 2205/06 + C10N 2060/02**
3. **C10M 2205/06 + C10N 2060/02**
4. **C10M 2205/024 + C10M 2205/04 + C10M 2205/06**
5. **C10M 2205/024 + C10M 2205/06**
6. **C10M 2205/024 + C10M 2205/04**
7. **C10M 2205/04 + C10M 2205/06**
8. **C10M 2203/1025 + C10N 2020/02**
9. **C10M 2207/028 + C10N 2010/04**
10. **C10M 2219/046 + C10N 2010/04**
11. **C10M 2223/045 + C10N 2010/04**

US

1. **C10M 2203/1025 + C10N 2020/02**
2. **C10M 2205/04 + C10M 2205/06 + C10N 2060/02**
3. **C10M 2205/06 + C10N 2060/02**
4. **C10M 2205/022 + C10M 2205/024**
5. **C10M 2205/024 + C10M 2205/04 + C10M 2205/06**
6. **C10M 2205/024 + C10M 2205/06**
7. **C10M 2205/024 + C10M 2205/04**
8. **C10M 2207/028 + C10N 2010/04**
9. **C10M 2219/046 + C10N 2010/04**
10. **C10M 2223/045 + C10N 2010/04**
11. **C10M 2205/04 + C10M 2205/06**

Citation (applicant)

- US 3113986 A 19631210 - BRESLOW DAVID S, et al
- US 3700633 A 19721024 - WALD MILTON M, et al
- US 3634595 A 19720111 - PASQUALI GIORGIO
- US 3670054 A 19720613 - MARE HAROLD E DE LA, et al
- US 4116917 A 19780926 - ECKERT RUDOLF J A
- US 3985830 A 19761012 - FETTERS LEWIS J, et al
- GB 1030306 A 19660518 - SHELL INT RESEARCH
- US 5141996 A 19920825 - ZON ARIE V [NL], et al
- WO 9813443 A1 19980402 - SHELL INT RESEARCH [NL]
- WO 9921902 A1 19990506 - CASTROL LTD [GB], et al
- US 4146489 A 19790327 - STAMBAUGH ROBERT L, et al
- US 4292414 A 19810929 - SAITO AKIRA, et al
- US 4506056 A 19850319 - GAYLORD NORMAN G [US]
- US 3202678 A 19650824 - STUART FRANK A, et al
- US 3154560 A 19641027 - CARL OSUCH
- US 3172892 A 19650309
- US 3024195 A 19620306 - DRUMMOND ALAN Y, et al
- US 3024237 A 19620306 - DRUMMOND ALAN Y, et al
- US 3219666 A 19651123
- US 3216936 A 19651109 - LE SUER WILLIAM M
- US 3087936 A 19630430 - LE SUER WILLIAM M
- US 3254025 A 19660531 - LE SUER WILLIAM M

- EP 0330522 A2 19890830 - EXXON CHEMICAL PATENTS INC [US]
- J POLYMER SCIENCE, PART A: POLYMER CHEMISTRY, vol. 26, 1988, pages 1189 - 1198
- J. POLYMER SCIENCE, POLYMER LETTERS, VOL., vol. 20, 1982, pages 481 - 486
- J. POLYMER SCIENCE, POLYMER LETTERS, vol. 21, 1983, pages 23 - 30
- GAYLORD; MEHTA; MEHTA, J. APPLIED POLYMER SCIENCE, vol. 33, 1987, pages 2549 - 2558

Citation (search report)

- [A] EP 2055762 A2 20090506 - CHEVRON ORONITE CO [US]
- [A] WO 0027956 A1 20000518 - SHELL INT RESEARCH [NL]
- [A] WO 9823711 A1 19980604 - EXXON RESEARCH ENGINEERING CO [US], et al
- [A] EP 0298578 A2 19890111 - SHELL INT RESEARCH [NL]
- [A] EP 0425027 A2 19910502 - SHELL INT RESEARCH [NL]
- [A] US 6034042 A 20000307 - RHODES ROBERT BARNETT [US]

Cited by

EP2980193A4; EP2607466A3; US2023141132A1; EP2607461A1; AU2012268822B2; WO2019077105A1; WO2019202150A1; EP3149132B1; EP2055761A2

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 2363454 A1 20110907; EP 2363454 B1 20180926; CA 2732190 A1 20110823; CA 2732190 C 20180619; CN 102161927 A 20110824; CN 102161927 B 20170623; JP 2011174068 A 20110908; JP 5781787 B2 20150924; SG 173979 A1 20110929; US 2011207642 A1 20110825

DOCDB simple family (application)

EP 10196988 A 20101224; CA 2732190 A 20110222; CN 201110043416 A 20110223; JP 2011037181 A 20110223; SG 2011012614 A 20110222; US 201113030159 A 20110218