

Title (en)  
COLD CRANKING SIMULATOR VISCOSITY REDUCING BASE STOCKS AND LUBRICATING OIL FORMULATIONS CONTAINING THE SAME

Title (de)  
SCHMIERBASIS ZUR VERRINGERUNG DER VISKOSITÄT FÜR EINEN KALTSTARTSIMULATOR UND SCHMIERÖLFORMULIERUNGEN DAMIT

Title (fr)  
HUILES DE BASE RÉDUISANT LA VISCOSITÉ D'UN SIMULATEUR DE DÉMARRAGE À FROID ET FORMULATIONS D'HUILE LUBRIFIANTE LES CONTENANT

Publication  
**EP 3601500 A1 20200205 (EN)**

Application  
**EP 18714119 A 20180320**

Priority  
• US 201762477738 P 20170328  
• EP 17178247 A 20170628  
• US 2018023245 W 20180320

Abstract (en)  
[origin: SG11201908484PA] INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT) CORRECTED VERSION (19) World Intellectual Property Organization International Bureau (43) International Publication Date 11111111111011010111110111010 1101111110011110011110111 10# (10) International Publication Number WO 2018/183032 A8 04 October 2018 (04.10.2018) Wi PO I PCT (51) International Patent Classification: C/OM 105/34 (2006.01) C/ OM 171/02 (2006.01) (21) International Application Number: PCT/US2018/023245 (22) International Filing Date: 20 March 2018 (20.03.2018) (25) Filing Language: English (26) Publication Language: English (30) Priority Data: 62/477,738 28 March 2017 (28.03.2017) US 17178247.7 28 June 2017 (28.06.2017) EP (71) Applicant: EXXONMOBIL CHEMICAL PATENTS INC. [US/US]; 5200 Bayway Drive, Baytown, TX 77520 (US). (72) Inventor: LEWIS, Kyle, G.; 12726 Apple Bend Circle, Houston, TX 77044 (US). (74) Agent: CHEN, Siwen et al.; ExxonMobil Chemical Com- pany, Law Department, P.O. Box 2149, Baytown, TX 77522-2149 (US). (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW. (54) Title: COLD CRANKING SIMULATOR VISCOSITY REDUCING BASE STOCKS AND LUBRICATING OIL FORMU- LATIONS CONTAINING THE SAME " PAO-E. 30 - 25 - 20 - D(ccsv) 15 - / 10 - 5 - co en (57) : This disclosure relates to cold cranking simulator viscosity ("CCSV") reducing base stocks that allow flexibility for low Go viscosity SAE engine oil grades (e.g., 5W and OW) to meet demanding low temperature viscosity requirements while maintaining a higher base oil viscosity for improved wear protection. The CCSV-reducing base stocks include mono-esters derivable from a Guerbet 00 alcohol and a monocarboxylic acid. The disclosure also relates to lubricating oils containing the CCSV-reducing base stocks, and 1-1 N containing one or more of the CCSV-reducing base stocks. [Continued on next page] a method for improving fuel efficiency and/or wear protection in an engine by using as the lubricating engine oil a formulated oil D(kv) 10 FIG. 1 WO 2018/183032 A8 MIDEDIM01101 DIONER1311111111111111111111111111111111101111110#10# (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG). Declarations under Rule 4.17: as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) Published: with international search report (Art. 21(3)) (48) Date of publication of this corrected version: 27 December 2018 (27.12.2018) (15) Information about Correction: see Notice of 27 December 2018 (27.12.2018)

IPC 8 full level  
**C10M 105/34** (2006.01); **C10M 171/02** (2006.01)

CPC (source: EP)  
**C10M 105/34** (2013.01); **C10M 171/02** (2013.01); **C10M 2207/2815** (2013.01); **C10N 2020/02** (2013.01); **C10N 2030/02** (2013.01); **C10N 2030/06** (2013.01); **C10N 2030/54** (2020.05)

Citation (search report)  
See references of WO 2018183032A1

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)  
CN 110573596 A 20191213; CN 110573596 B 20230217; EP 3601500 A1 20200205; SG 11201908484P A 20191030

DOCDB simple family (application)  
CN 201880028806 A 20180320; EP 18714119 A 20180320; SG 11201908484P A 20180320