

(51) International Patent Classification:
C10M 141/10 (2006.01)

(21) International Application Number:
PCT/US2024/012159

(22) International Filing Date:
19 January 2024 (19.01.2024)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/440,788 24 January 2023 (24.01.2023) US

GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, 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, ME, 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))

— of inventorship (Rule 4.17(iv))

Published:

— with international search report (Art. 21(3))

(71) Applicant: THE LUBRIZOL CORPORATION
[US/US]; 29400 Lakeland Boulevard, Wickliffe, Ohio 44092-2298 (US).

(72) Inventors: MAYHEW, Alexandra; P.O. Box 88, Belper, Derby Derbyshire DE56 1QN (GB). ROBIN, Mathew P.; P.O. Box 88, Belper, Derby Derbyshire DE56 1QN (GB). BARTON, William R.S.; P.O. Box 88, Belper, Derby Derbyshire DE56 1QN (GB). BACKMAN, Arthur L.; 29400 Lakeland Boulevard, Wickliffe, Ohio 44092-2298 (US). RAGUZ, Mary Galic; 29400 Lakeland Boulevard, Wickliffe, Ohio 44092-2298 (US). JONES, Joanne L.; P.O. Box 88, Belper, Derby Derbyshire DE56 1QN (GB). VINCENT, Paul R.; P.O. Box 88, Belper, Derby Derbyshire DE56 1QN (GB).

(74) Agent: FUHRER, Eryn A. et al.; The Lubrizol Corporation, 29400 Lakeland Boulevard, Legal Department, Mail Drop 022B, Wickliffe, Ohio 44092-2298 (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, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, 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, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, CV,

(54) Title: LUBRICATING COMPOSITION WITH PHENOLIC ANTIOXIDANT AND LOW ACTIVE SULFUR

(57) Abstract: A lubricating composition includes an oil of lubricating viscosity, a phenolic antioxidant, a sulfurized organic compound with an active sulfur content of no more than 8 wt. %, and optionally, one or more performance additives selected from: a succinimide dispersant, and a detergent. In addition, a method for improving oxidative stability of a lubricating oil in an engine comprises supplying to the engine a lubricating composition including an oil of lubricating viscosity, a phenolic antioxidant, a sulfurized organic compound with an active sulfur content of no more than 8 wt. %, and optionally, one or more performance additives selected from: a succinimide dispersant, and a detergent.



WO 2024/158648 A1