



(51) International Patent Classification:

C10M 105/06 (2006.01) C10N 30/10 (2006.01)

C10M 109/02 (2006.01)

(21) International Application Number:

PCT/US2014/020490

(22) International Filing Date:

5 March 2014 (05.03.2014)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/786,999 15 March 2013 (15.03.2013)

US

(71) Applicant: EXXONMOBIL RESEARCH AND ENGINEERING COMPANY [US/US]; 1545 Route 22 East, P.O. Box 900, Annandale, NJ 08801-0900 (US).

(72) Inventors: COOPER, Kathleen, Kim; 39 Louis Street, South River, NJ 08882 (US). CHRISTENSEN, Gary; 1465 Glassboro Road, Wenonah, NJ 08090 (US). HO, Su-zzy, Chen Hsi; 1066 Stuart Road, Princeton, NJ 08540 (US). WINSETT, Beth, A.; 3910 Larkfield Court, Houston, TX 77059 (US).

(74) Agents: SHANLEY, Matthew, T. et al.; Exxonmobil Research and Engineering Company, 1545 Route 22 East, P.O. Box 900, Annandale, NJ 08801-0900 (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, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, 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.

(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, 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).

Published:

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

(54) Title: METHOD FOR IMPROVING THERMAL-OXIDATIVE STABILITY AND ELASTOMER COMPATIBILITY

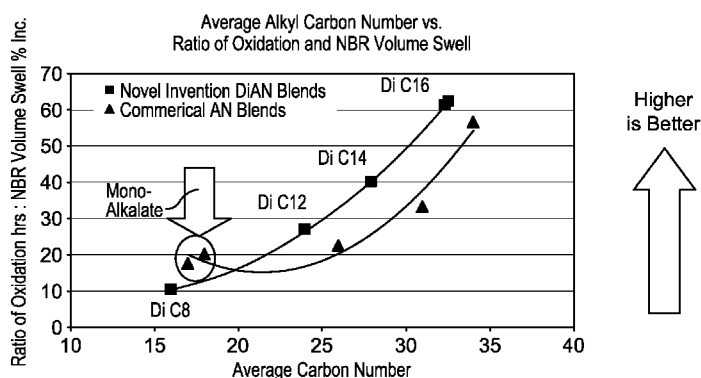


Figure 1

(57) Abstract: A method for improving thermo-oxidative stability and elastomer compatibility in an apparatus lubricated with a lubricating oil by using as the lubricating oil a formulated oil including a lubricating oil base stock. The lubricating oil base stock includes a di-alkylated aromatic base stock of the formula: (R¹) - (R²) - (R¹) wherein each R¹ is the same or different and represents a C₁₀-C₃₀ alkyl group; R² represents an aromatic moiety. The di-alkylated aromatic base stock includes at least 44 wt% dialkylate product. Thermo-oxidative stability and elastomer compatibility are improved as compared to thermo-oxidative stability and elastomer compatibility achieved using a lubricating oil base stock other than the di-alkylated aromatic base stock. A lubricating oil including the di-alkylated base stock of the above formula, and the di-alkylated aromatic base stock of the above formula.

