

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
23 February 2006 (23.02.2006)

PCT

(10) International Publication Number
WO 2006/019821 A3

(51) International Patent Classification:
C10M 101/02 (2006.01)

(21) International Application Number:
PCT/US2005/024860

(22) International Filing Date: 13 July 2005 (13.07.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/599,665 5 August 2004 (05.08.2004) US
10/949,779 23 September 2004 (23.09.2004) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
21 September 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: MULTIGRADE ENGINE OIL PREPARED FROM FISCHER-TROPSCH DISTILLATE BASE OIL

(57) Abstract: A multigrade engine oil meeting the specifications for SAE J300 revised June 2001 requirements and a process for preparing it, said engine oil comprising (a) between about 15 to about 94.5 wt % of a hydroisomerized distillate Fischer-Tropsch base oil characterized by (i) a kinematic viscosity between about 2.5 and about 8 cSt at 100 °C, (ii) at least about 3 wt % of the molecules having cycloparaffin functionality, and (iii) a ratio of weight percent molecules with monocycloparaffin functionality to weight percent of molecules with multicycloparaffin functionality greater than about 15; (b) between about 0.5 to about 20 wt % of a pour point depressing base oil blending component prepared from an hydroisomerized bottoms material having an average degree of branching in the molecules between about 5 and 9 alkyl-branches per 100 carbon atoms and wherein not more than 10 wt % boils below about 900 °F; and (c) between about 5 to about 30 wt % of an additive package designed to meet the specifications for ILSAC GF-3.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/24860

A. CLASSIFICATION OF SUBJECT MATTER

IPC: C10M 101/02(2006.01);C10G 73/38(2006.01)

USPC: 208/19,27,950;508/110,371,591;585/1

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 208/19, 27, 950; 508/110, 371, 591; 585/1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EAST search terms: hydroisomeriz\$, Fischer-Tropsch, multicyclopaffin, degree near branching

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y, E	US 7,053,254 B2 (MILLER) 30 May 2006 (30.05.2006), column 3, line 35 to column 4, line 54; column 6, line 58 to column 7, line 9.	1-36
Y, E	US 7,018,525 B2 (MILLER et al) 28 March 2006 (28.03.2006), column 4, lines 1-43.	1-36
Y	US 6,475,960 B1 (BERLOWITZ et al) 05 November 2002 (05.11.2002), column 1, line 65 to column 4, line 8.	1-36
A	US 6,096,940 A (WITTENBRINK et al) 01 August 2000 (01.08.2000), column 1, line 60 to column 2, line 52.	1-36
A	US 6,332,974 B1 (WITTENBRINK et al) 25 December 2001 (25.12.2001), column 1, line 48 to column 2, line 58.	1-36
A	US 6,165,949 A (BERLOWITZ et al) 26 December 2000 (26.12.2000), column 1, line 52 to column 4, line 21.	1-36



Further documents are listed in the continuation of Box C.



See patent family annex.

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Date of the actual completion of the international search
16 June 2006 (16.06.2006)

Date of mailing of the international search report
13 JUL 2006

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