

Title (en)
Marine engine lubrication

Title (de)
Schiffsmotorschmiierung

Title (fr)
Lubrification de moteur marin

Publication
EP 2727984 A1 20140507 (EN)

Application
EP 13184408 A 20130913

Priority
• EP 12191060 A 20121102
• EP 13184408 A 20130913

Abstract (en)
Two-stroke cross-head marine compression-ignited engine system lubrication is effected by a composition comprising a major amount of an oil of lubricating viscosity containing at least 50 mass % of a basestock containing greater than or equal to 90 % saturates and less than or equal to 0.03 % sulphur or a mixture thereof, and respective minor amounts of an oil-soluble overbased metal alkyl salicylate detergent and an oil-soluble polyalkenyl-substituted carboxylic acid anhydride or an oil-soluble alkylated phenol. The presence of the anhydride or the phenol improves asphaltene dispersency in the lubricant.

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

CPC (source: EP KR US)
C10M 129/10 (2013.01 - KR); **C10M 129/20** (2013.01 - US); **C10M 129/76** (2013.01 - US); **C10M 139/04** (2013.01 - KR); **C10M 169/04** (2013.01 - KR); **C10M 169/045** (2013.01 - EP US); **C10M 2203/1025** (2013.01 - EP US); **C10M 2205/0285** (2013.01 - EP US); **C10M 2205/22** (2013.01 - EP US); **C10M 2207/023** (2013.01 - EP US); **C10M 2207/127** (2013.01 - EP US); **C10M 2207/129** (2013.01 - EP US); **C10M 2207/262** (2013.01 - EP US); **C10M 2227/09** (2013.01 - EP US); **C10N 2020/04** (2013.01 - EP US); **C10N 2030/04** (2013.01 - EP US); **C10N 2040/252** (2020.05 - EP US)

Citation (applicant)
• WO 2008119936 A1 20081009 - BP PLC [GB], et al
• WO 2008021737 A1 20080221 - LUBRIZOL CORP [US], et al
• US 2007027057 A1 20070201 - LE COENT JEAN-LOUIS [FR], et al
• US 5498809 A 19960312 - EMERT JACOB [US], et al
• US 5663130 A 19970902 - EMERT JACOB [US], et al
• US 5705577 A 19980106 - ROSSI ALBERT [US], et al
• US 5814715 A 19980929 - CHEN FRANK JOUNG-YEI [US], et al
• US 6022929 A 20000208 - CHEN FRANK JOUNG-YEI [US], et al
• US 6030930 A 20000229 - EMERT JACOB [US], et al
• US 4952739 A 19900828 - CHEN FRANK J [US]
• US 4152499 A 19790501 - BOERZEL PAUL [DE], et al
• US 3087936 A 19630430 - LE SUER WILLIAM M
• US 3172892 A 19650309
• US 3215707 A 19651102 - RENSE RUDOLPH J
• US 3231587 A 19660125 - RENSE RUDOLPH J
• US 3272746 A 19660913 - LE SUER WILLIAM M, et al
• US 3275554 A 19660927 - HENDRIK WAGENAAR ADRIAAN
• US 3381022 A 19680430 - LE SUER WILLIAM M
• US 3442808 A 19690506 - TRAISE THORNTON P, et al
• US 3565804 A 19710223 - HONNEN LEWIS R, et al
• US 3912764 A 19751014 - PALMER JR JOHN F
• US 4110349 A 19780829 - COHEN JEROME MARTIN
• US 4234435 A 19801118 - MEINHARDT NORMAN A, et al
• US 5777025 A 19980707 - SPENCER JEREMY R [GB], et al
• US 5891953 A 19990406 - SPENCER JEREMY R [GB], et al
• EP 0382450 B1 19950628 - EXXON CHEMICAL PATENTS INC [US]
• CA 1335895 C 19950613 - EXXON CHEMICAL PATENTS INC [US]
• GB 1440219 A 19760623 - COOPER LTD ETHYL
• "Engine Oil Licensing and Certification System", December 1996, INDUSTRY SERVICES DEPARTMENT
• "The Benefits of Salicylate Detergents in TPEO Applications with a Variety of Base Stocks", IH INTERNATIONAL SYMPOSIUM ON MARINE ENGINEERING, 24 October 2005 (2005-10-24)
• "Meeting the Challenge of New Base Fluids for the Lubrication of Medium Speed Marine Engines - An Additive Approach", CIMAC CONGRESS, 21 May 2007 (2007-05-21)

Citation (search report)
• [A] WO 9626995 A1 19960906 - BP CHEMICALS ADDITIVES [GB], et al
• [X] US 2012037117 A1 20120216 - BERTRAM RICHARD [GB], et al
• [X] US 2012028522 A1 20120202 - GARNER TERENCE [GB], et al
• [X] US 2012103303 A1 20120503 - HARTLEY JOSEPH P [GB]
• [X] US 2011077182 A1 20110331 - JUKES RONALD THEODORUS FAKE [NL]
• [X] US 2009093387 A1 20090409 - BERTRAM RICHARD D [GB], et al

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 2727984 A1 20140507; EP 2727984 B1 20190123; AU 2013251257 A1 20140522; AU 2013251257 B2 20170202; CA 2831948 A1 20140502; CA 2831948 C 20200818; CN 103805311 A 20140521; ES 2712955 T3 20190516; JP 2014091834 A 20140519; JP 6352615 B2 20180704; KR 102156944 B1 20200916; KR 20140057171 A 20140512; SG 2013081369 A 20140627; US 2014128301 A1 20140508

DOCDB simple family (application)

EP 13184408 A 20130913; AU 2013251257 A 20131101; CA 2831948 A 20131101; CN 201310535074 A 20131101; ES 13184408 T 20130913; JP 2013228523 A 20131101; KR 20130130663 A 20131031; SG 2013081369 A 20131101; US 201314069419 A 20131101