

Title (en)

FUEL COMPOSITIONS AND ADDITIVE CONCENTRATES, AND THEIR USE IN INHIBITING ENGINE COKING

Publication

**EP 0147240 A3 19860402 (EN)**

Application

**EP 84309143 A 19841228**

Priority

- US 56707183 A 19831230
- US 56708983 A 19831230
- US 56709083 A 19831230

Abstract (en)

[origin: EP0247706A2] Coking in and around the injector nozzles of indirect injection compression ignition engines is reduced by means of distillate fuel into which has been blended suitable concentrations of: (a) organic nitrate ignition accelerator, (b) hydrocarbyl amine having from 3 to 60 carbons and from 1 to 10 nitrogens, and (c) N,N'-disalicylidene-1,2-diaminopropane. Additive concentrates can be formulated using such additive combinations.

IPC 1-7

**C10L 1/22**

IPC 8 full level

**C10L 1/22 (2006.01); F02B 3/06 (2006.01)**

CPC (source: EP)

**C10L 1/22 (2013.01); C10L 10/02 (2013.01); C10L 10/04 (2013.01); C10L 1/222 (2013.01); C10L 1/2222 (2013.01); C10L 1/2283 (2013.01); C10L 1/231 (2013.01); C10L 1/2383 (2013.01); F02B 3/06 (2013.01)**

Citation (search report)

- [A] US 4208190 A 19800617 - MALEC ROBERT E [US]
- [A] US 3701641 A 19721031 - RAKOW MARVIN S, et al
- [A] US 2768884 A 19561030 - BOWERS ROLLAND G
- [A] DE 1232392 B 19670112 - CALIFORNIA RESEARCH CORP

Cited by

US7229481B2; US5340488A; GB2172012A; US6719814B1; US5460634A; WO2011080250A1; US8152868B2; WO2010076303A1; US8771385B2; EP2949732A1; WO2020070246A1; WO2016188850A1; WO2018077976A1; US11104857B2; WO2011076948A1; US8541635B2; WO2021018895A1; EP2077315A1; US8273137B2; EP2078743A1; US7189269B2; US6200359B1; WO2015091458A1; US9587195B2; US9663735B2; WO9301260A1; WO03044134A3; WO2012162403A1; WO2013034617A1; US9752092B2; EP2065367A1; EP2078744A1; WO2017202735A1; EP2055762A2; US11359155B2; US6733550B1; US7737311B2; EP2907867A1; EP3581637A1; WO2020120416A1; US11867117B2; US7638661B2; WO2010076304A1; US8152869B2; WO2013086138A1; US9017429B2; EP3184612A1; US8987537B1; EP2947135A1; WO2015179017A2; EP2990465A1; US9499758B2; US10457881B2; US8475647B2; DE102013112821A1; WO201806729A1; WO2022228989A1; EP2889361A1; US9057035B1; US9487718B2; WO2017134251A1; US10577551B2; US11254885B2; EP2055761A2; WO2012163935A2; WO2020109184A1; WO2022228990A1; US11499106B2; EP2371931A1; WO2012098258A1; WO2014096234A1; US8876923B2; US9222047B2; WO2016188858A1; WO2017081199A1; US11001775B2

Designated contracting state (EPC)

AT BE CH DE FR GB IT LI LU NL SE

DOCDB simple family (publication)

**EP 0247706 A2 19871202; EP 0247706 A3 19880113; EP 0247706 B1 19890614;** CA 1270642 A 19900626; CA 1284583 C 19910604; CA 1284883 C 19910618; EP 0147240 A2 19850703; EP 0147240 A3 19860402; EP 0147240 B1 19890405; EP 0251419 A1 19880107; EP 0251419 B1 19890531

DOCDB simple family (application)

**EP 87201460 A 19841228;** CA 470058 A 19841213; CA 615608 A 19900119; CA 615609 A 19900119; EP 84309143 A 19841228; EP 87201461 A 19841228