Title (en)

Method for reducing combustion chamber deposit flaking

Title (de)

Verfahren zur Abblätternverringerung der Brennkammerablagerungen

Title (fr)

Procédé pour diminuer l'écaillage des dépôts de la chambre de combustion.

Publication

EP 1528097 A3 20050713 (EN)

Application

EP 04024823 A 20041019

Priority

US 69661803 A 20031029

Abstract (en)

[origin: EP1528097A2] A method reduces combustion chamber deposit flaking and spark ignited internal combustion engines. The method includes supplying a fuel having an additive that includes a metal-containing compound to a spark ignited internal combustion engine. The metal-containing compound is supplied in an amount effective to reduce combustion chamber deposit flaking. In one example, the metal is manganese and the additive compound is MMT. The reduction or elimination of combustion chamber deposit flaking means a reduction in cold start emissions from the engine.

IPC 1-7

C10L 1/12; C10L 1/18; C10L 1/24; C10L 1/30; C10L 10/00; C10L 10/02; C10L 1/26

IPC 8 full level

F02M 25/00 (2006.01); **C10L 1/12** (2006.01); **C10L 1/18** (2006.01); **C10L 1/182** (2006.01); **C10L 1/188** (2006.01); **C10L 1/24** (2006.01); **C10L 1/26** (2006.01); **C10L 1/30** (2006.01); **C10L 10/00** (2006.01); **C10L 10/02** (2006.01); **F02M 27/02** (2006.01)

CPC (source: EP KR US)

C10L 1/1216 (2013.01 - EP US); **C10L 1/1225** (2013.01 - EP US); **C10L 1/1233** (2013.01 - EP US); **C10L 1/1266** (2013.01 - EP US); **C10L 1/1275** (2013.01 - EP US); **C10L 1/1283** (2013.01 - EP US); **C10L 1/1814** (2013.01 - EP US); **C10L 1/1828** (2013.01 - EP US); **C10L 1/188** (2013.01 - EP US); **C10L 1/2437** (2013.01 - EP US); **C10L 1/2608** (2013.01 - EP US); **C10L 1/301** (2013.01 - EP US); **C10L 1/305** (2013.01 - EP US); **C10L 10/02** (2013.01 - EP US); **C10L 10/04** (2013.01 - EP US); **F02M 25/00** (2013.01 - KR); **F02M 27/02** (2013.01 - KR)

Citation (search report)

- [XA] US 2003097783 A1 20030529 - JORDAN FREDERICK L [US]
- [X] US 4191536 A 19800304 - NIEBYLSKI LEONARD M [US]
- [X] US 3127351 A 19640331
- [X] GB 886447 A 19620110 - EXXON RESEARCH ENGINEERING CO
- [X] GB 787374 A 19571204 - ETHYL CORP
- [X] US 4690687 A 19870901 - JOHNSTON THOMAS E [US], et al
- [DX] EP 0466512 B1 19940629 - ETHYL CORP [US]
- [DX] US 5113803 A 19920519 - HOLLRAH DON P [US], et al
- [A] US 3442631 A 19690506 - GLUCKSTEIN MARTIN E

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AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

EP 1528097 A2 20050504; **EP 1528097 A3 20050713**; **EP 1528097 B1 20101208**; AR 046559 A1 20051214; AT E491012 T1 20101215; AU 2004218620 A1 20050519; BR PI0404762 A 20050628; CA 2482735 A1 20050429; CA 2482735 C 20091124; CA 2677761 A1 20050429; CA 2677761 C 20110913; CN 101914397 A 20101215; CN 1637120 A 20050713; DE 602004030408 D1 20110120; JP 2005133720 A 20050526; KR 20050040783 A 20050503; MX PA04010020 A 20050503; RU 2004131494 A 20060510; RU 2283437 C2 20060910; SG 111280 A1 20050530; US 2005091913 A1 20050505; ZA 200408543 B 20050928

DOCDB simple family (application)

EP 04024823 A 20041019; AR P040103895 A 20041026; AT 04024823 T 20041019; AU 2004218620 A 20041005; BR PI0404762 A 20041028; CA 2482735 A 20040928; CA 2677761 A 20040928; CN 200410092171 A 20041028; CN 201010275337 A 20041028; DE 602004030408 T 20041019; JP 2004309792 A 20041025; KR 20040086425 A 20041028; MX PA04010020 A 20041012; RU 2004131494 A 20041028; SG 200406302 A 20041028; US 69661803 A 20031029; ZA 200408543 A 20041021