

Title (en)

METHOD FOR STARTING A COMBUSTION ENGINE SUPPLIED WITH A FUEL CONTAINING ETHANOL

Title (de)

VERFAHREN ZUM STARTEN EINES MIT EINEM ETHANOL ENTHALTENDEN BRENNSTOFF VERSORGTE VERBRENNUNGSMOTORS

Title (fr)

PROCEDE DE DEMARRAGE D'UN MOTEUR A COMBUSTION ALIMENTE PAR UN CARBURANT CONTENANT DE L'ETHANOL

Publication

EP 2344741 A1 20110720 (FR)

Application

EP 09748430 A 20090923

Priority

- FR 2009051801 W 20090923
- FR 0857152 A 20081022

Abstract (en)

[origin: WO2010046574A1] The invention relates to a method for starting a combustion engine (1) supplied with a first fuel that may contain ethanol, said engine being provided with a cold-start auxiliary system including a tank (5) for a second fuel having a low ethanol content, wherein said method comprises determining the temperature of the liquid coolant of the engine (1), and determining the ethanol proportion in the first fuel, characterised in that, if the temperature of the liquid coolant of the engine is lower than a predetermined critical temperature and if the ethanol proportion of the fuel is higher than a predetermined threshold, the second fuel is pre-injected at the inlet of the engine (1) in response to the occurrence of an event preceding the engine start request.

IPC 8 full level

F02D 41/00 (2006.01); **F02D 19/06** (2006.01); **F02D 41/06** (2006.01); **F02M 37/00** (2006.01)

CPC (source: EP)

F02D 19/0665 (2013.01); **F02D 19/081** (2013.01); **F02D 19/084** (2013.01); **F02D 19/087** (2013.01); **F02D 41/0025** (2013.01); **F02D 41/064** (2013.01); **F02D 2200/0611** (2013.01); **Y02T 10/30** (2013.01)

Citation (search report)

See references of WO 2010046574A1

Designated contracting state (EPC)

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 SE SI SK SM TR

Designated extension state (EPC)

AL BA RS

DOCDB simple family (publication)

FR 2937381 A1 20100423; **FR 2937381 B1 20110722**; BR PI0914037 A2 20151103; BR PI0914037 B1 20190618; EP 2344741 A1 20110720; WO 2010046574 A1 20100429

DOCDB simple family (application)

FR 0857152 A 20081022; BR PI0914037 A 20090923; EP 09748430 A 20090923; FR 2009051801 W 20090923