

Title (en)

METHOD AND DEVICE FOR VARYING THE SUPPLY PRESSURE APPLIED TO A HIGH PRESSURE PUMP AND GENERATED BY A LOW PRESSURE PUMP

Title (de)

VERFAHREN UND VORRICHTUNG ZUR VARIATION EINES VON EINER NIEDERDRUCKPUMPE ERZEUGTEN UND AN EINER HOCHDRUCKPUMPE ANLIEGENDEN VORDRUCKS

Title (fr)

PROCEDE ET DISPOSITIF POUR FAIRE VARIER UNE PRESSION D'ADMISSION PRODUITE PAR UNE POMPE BASSE PRESSION ET APPLIQUEE A UNE POMPE HAUTE PRESSION

Publication

EP 1228304 A1 20020807 (DE)

Application

EP 00972629 A 20001011

Priority

- DE 0003563 W 20001011
- DE 19951410 A 19991026

Abstract (en)

[origin: DE19951410A1] The invention relates to a method and a device for varying a supply pressure (p_{soll}) applied to a high pressure pump (3) and generated by a low pressure pump (2), whereby said low pressure pump (2) and said high pressure pump (3) supply fuel to an internal combustion engine (1). In the inventive method the following steps are disclosed: determination of the current temperature (T_{Krst}) of the fuel in the high pressure pump (3); calculating the lowest possible supply pressure (p_{soll}), depending upon the fuel temperature (T_{Krst}), that would reliably avoid any fuel vaporisation in the high pressure pump (3); controlling or regulating the low pressure pump (2) in such a way as to maintain the calculated supply pressure (p_{soll}); whereby the supply pressure (p_{soll}) is kept as low as possible to relieve the low pressure pump (2) and the supply pressure is kept high enough to reliably avoid vaporisation of fuel in the high pressure pump (3). The method is preferably carried out using physical models of the high pressure pump (3).

IPC 1-7

F02D 41/30; **F02D 41/14**

IPC 8 full level

F02D 45/00 (2006.01); **F02D 41/14** (2006.01); **F02D 41/30** (2006.01); **F02D 41/38** (2006.01)

CPC (source: EP KR US)

F02D 41/1401 (2013.01 - EP US); **F02D 41/3082** (2013.01 - EP US); **F02M 37/04** (2013.01 - KR); **F02D 2200/0606** (2013.01 - EP US); **F02D 2250/02** (2013.01 - EP US)

Citation (search report)

See references of WO 0131184A1

Designated contracting state (EPC)

DE FR

DOCDB simple family (publication)

DE 19951410 A1 20010510; EP 1228304 A1 20020807; EP 1228304 B1 20050427; JP 2003513193 A 20030408; KR 100720847 B1 20070525; KR 20020060212 A 20020716; US 6708671 B1 20040323; WO 0131184 A1 20010503

DOCDB simple family (application)

DE 19951410 A 19991026; DE 0003563 W 20001011; EP 00972629 A 20001011; JP 2001533303 A 20001011; KR 20027005274 A 20020425; US 11161202 A 20020528