

Title (en)

Fuel pressure control device for high pressure fuel injection system

Title (de)

Kraftstoffdrucksteuervorrichtung für ein Hochdruckkraftstoffeinspritzsystem

Title (fr)

Dispositif de commande de pression pour un system d'injection de carburant à haute pression

Publication

EP 1030048 A2 20000823 (EN)

Application

EP 00102392 A 20000203

Priority

JP 4135899 A 19990219

Abstract (en)

The present invention proposes a fuel pressure control apparatus and method for a high-pressure fuel injection system which sufficiently reduces a fuel pressure in an accumulator line while preventing the high-pressure fuel injection system from being adversely affected. The fuel pressure control apparatus for the high-pressure fuel injection system is equipped with an accumulator line for accumulating fuel supplied from a fuel pump at a high pressure and supplying the fuel to fuel injection valves, and with a relief valve for discharging fuel in the accumulator line. Furthermore, the apparatus is equipped with fuel pressure control means for detecting a fuel pressure in the accumulator line and driving the relief valve so as to reduce the fuel pressure in accordance with a pressure reduction requirement based on a comparison between the detected fuel pressure and a target pressure. The fuel pressure control means controls an opening movement of the relief valve such that the open-valve period of the relief valve does not overlap with an open-valve period of the fuel injection valves, a timing for detecting fuel pressure, a period for force-feeding fuel from the fuel pump or the like. <IMAGE>

IPC 1-7

F02D 41/38

IPC 8 full level

F02D 41/38 (2006.01); **F02D 41/40** (2006.01); **F02M 37/00** (2006.01); **F02M 55/02** (2006.01)

CPC (source: EP)

F02D 41/3827 (2013.01); **F02D 41/3845** (2013.01); **F02D 41/3863** (2013.01); **F02D 41/3872** (2013.01); **F02D 2041/389** (2013.01); **F02D 2200/0602** (2013.01); **F02D 2250/14** (2013.01); **F02D 2250/31** (2013.01)

Citation (applicant)

JP H1054318 A 19980224 - DENSO CORP

Cited by

EP1900930A1; CN109113882A; FR2862092A1; US2012097131A1; US9624867B2; US7216627B2; US7296558B2; US7281517B2; US7637242B2; US7178506B2; WO2020088793A1; WO2005111409A1; US7848868B2; EP2640959A1; EP1669579A2; EP2771557A1

Designated contracting state (EPC)

DE ES FR GB IT

DOCDB simple family (publication)

EP 1030048 A2 20000823; **EP 1030048 A3 20020327**; **EP 1030048 B1 20041229**; DE 60016989 D1 20050203; DE 60016989 T2 20050609; DE 60022233 D1 20050929; DE 60022233 T2 20060309; EP 1304470 A2 20030423; EP 1304470 A3 20040519; EP 1304470 B1 20050824; EP 1304471 A2 20030423; EP 1304471 A3 20040519; ES 2232336 T3 20050601; ES 2243809 T3 20051201; JP 2000240494 A 20000905; JP 4023020 B2 20071219

DOCDB simple family (application)

EP 00102392 A 20000203; DE 60016989 T 20000203; DE 60022233 T 20000203; EP 03001463 A 20000203; EP 03001464 A 20000203; ES 00102392 T 20000203; ES 03001463 T 20000203; JP 4135899 A 19990219