

Title (en)  
Starting system for fuel injection engine

Title (de)  
Startanlage für eine Brennkraftmaschine

Title (fr)  
Démarrage pour moteur à combustion interne

Publication  
**EP 2169213 A2 20100331 (EN)**

Application  
**EP 09170112 A 20090911**

Priority  
JP 2008244098 A 20080924

Abstract (en)  
In a control system for a fuel injection engine in which at least operations of a fuel injection valve and a fuel pump are controlled by an electrical control unit to become incapable of control processing in a state in which a voltage of a battery reaches a predetermined reset voltage or lower, prohibition signal output means (41) outputs a prohibition signal for prohibiting operation of the fuel pump (34) by detecting starting of operation of a starter motor; permission signal output means (42) outputs a permission signal for permitting operation of the fuel pump (34) by determining that a pump operation permission state capable of avoiding a voltage of the battery reaching a predetermined reset voltage or lower even by operation of the fuel pump (34) has reached prior to fuel injection by the fuel injection valve after operation of the fuel pump (34) is stopped in response to starting of operation of the starter motor; and pump drive means (43) drives the fuel pump (34) according to a prohibition signal output from the prohibition signal output means (41) and a permission signal output from the permission signal output means (42). Accordingly, it is possible to enhance engine startability when a battery has deteriorated.

IPC 8 full level  
**F02N 11/08** (2006.01)

CPC (source: EP)  
**F02D 41/3082** (2013.01); **F02N 11/0862** (2013.01); **F02D 41/062** (2013.01); **F02D 2200/503** (2013.01)

Citation (applicant)  
JP H07317620 A 19951205 - NIPPON DENSO CO

Cited by  
CN111075627A; EP3070310A1; CN105986916A; US9752516B2

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