

Title (en)  
FUEL INJECTION CONTROL DEVICE FOR AN INTERNAL COMBUSTION ENGINE.

Title (de)  
EINRICHTUNG ZUR STEUERUNG DER KRAFTSTOFFEINSPRITZUNG BEI EINER BRENNKRAFTMASCHINE.

Title (fr)  
INSTALLATION DE COMMANDE DE L'INJECTION DE CARBURANT D'UN MOTEUR A COMBUSTION INTERNE.

Publication  
**EP 0683855 A1 19951129 (DE)**

Application  
**EP 94904980 A 19940129**

Priority  
• DE 9400080 W 19940129  
• DE 4304163 A 19930212

Abstract (en)  
[origin: WO9418444A2] In the fuel injection control device described, immediately after the engine has been started up, the position of the crankshaft and camshaft is determined. This is achieved either by means of an absolute transmitter system or by identification of the stopping point, with the angular position of the crankshaft or camshaft being memorized when stationary. Immediately after the engine has been restarted, fuel is injected into an open inlet valve in the appropriate phase. On commencement of rotation, further injections are triggered into one or several open or still closed inlet valves. Once correct synchronization has been achieved, the control device switches over to normal injection.

IPC 1-7  
**F02D 41/06**; **F02D 41/34**

IPC 8 full level  
**F02D 41/06** (2006.01); **F02D 41/34** (2006.01); **F02D 45/00** (2006.01); **F02P 7/077** (2006.01)

CPC (source: EP KR US)  
**F02D 41/009** (2013.01 - EP US); **F02D 41/062** (2013.01 - EP US); **F02D 41/34** (2013.01 - KR); **F02P 7/0775** (2013.01 - EP US)

Citation (search report)  
See references of WO 9418444A2

Cited by  
US7373928B2

Designated contracting state (EPC)  
DE FR GB IT

DOCDB simple family (publication)  
**DE 4304163 A1 19940825**; DE 59403791 D1 19970925; EP 0683855 A1 19951129; EP 0683855 B1 19970820; JP 3863914 B2 20061227; JP H08506397 A 19960709; KR 100289764 B1 20010601; KR 960701292 A 19960224; US 5595161 A 19970121; WO 9418444 A2 19940818; WO 9418444 A3 19940929

DOCDB simple family (application)  
**DE 4304163 A 19930212**; DE 59403791 T 19940129; DE 9400080 W 19940129; EP 94904980 A 19940129; JP 51751194 A 19940129; KR 19950703376 A 19950812; US 50527595 A 19950728