

Title (en)

HIGH-PRESSURE PUMP, PARTICULARLY FOR A FUEL INJECTION DEVICE OF A COMBUSTION ENGINE

Title (de)

HOCHDRUCKPUMPE, INSBESONDERE FÜR EINE KRAFTSTOFFEINSPRITZEINRICHTUNG EINER BRENNKRAFTMASCHINE

Title (fr)

POMPE HAUTE PRESSION, NOTAMMENT POUR SYSTEME D'INJECTION DE CARBURANT DE MOTEUR A COMBUSTION INTERNE

Publication

EP 1714030 B1 20080227 (DE)

Application

EP 04802795 A 20041123

Priority

- DE 2004002584 W 20041123
- DE 102004004705 A 20040130

Abstract (en)

[origin: WO2005073554A1] The high-pressure pump comprise a case (10, 14, 22) inside of which at least one pump element (18) is placed that has a pump plunger (20) driven in reciprocating motion by a drive shaft (12). Said pump plunger (20) is displaceably guided inside a cylinder bore (28) of a case part (22) and, inside this bore, delimits a pump working chamber (30). The pump plunger (20) is supported on the drive shaft (12) via a supporting element (40), and the pump plunger (20) and the supporting element (40) are pressed toward the drive shaft (12) via a pretensioned return spring (60). The supporting element (40) is guided in a manner that enables it to be displaced inside a cavity (46) formed in the housing part (22), in which the cylinder bore (28) is made, in the direction of the longitudinal axis (21) of the pump plunger (20) whereby being prevented from being able to rotate about the longitudinal axis.

IPC 8 full level

F04B 1/053 (2006.01); **F04B 1/04** (2006.01)

CPC (source: EP US)

F02M 59/102 (2013.01 - EP US); **F04B 1/0413** (2013.01 - EP US); **F04B 1/0426** (2013.01 - EP US); **F04B 1/0439** (2013.01 - EP US); **F04B 1/053** (2013.01 - EP US)

Designated contracting state (EPC)

DE ES FR GB IT

DOCDB simple family (publication)

WO 2005073554 A1 20050811; CN 100458150 C 20090204; CN 1906411 A 20070131; DE 102004004705 A1 20050818; DE 502004006367 D1 20080410; EP 1714030 A1 20061025; EP 1714030 B1 20080227; ES 2298845 T3 20080516; JP 2007500303 A 20070111; JP 4340289 B2 20091007; US 2007154326 A1 20070705; US 7775193 B2 20100817

DOCDB simple family (application)

DE 2004002584 W 20041123; CN 200480041080 A 20041123; DE 102004004705 A 20040130; DE 502004006367 T 20041123; EP 04802795 A 20041123; ES 04802795 T 20041123; JP 2006521395 A 20041123; US 58687104 A 20041123