

Title (en)  
FUEL INJECTION PUMP FOR AN INTERNAL COMBUSTION ENGINE

Title (de)  
KRAFTSTOFFEINSPRITZPUMPE FÜR BRENNKRAFTMASCHINEN

Title (fr)  
POMPE D'INJECTION DE CARBURANT POUR MOTEUR A COMBUSTION INTERNE

Publication  
**EP 0906506 A1 19990407 (DE)**

Application  
**EP 98907857 A 19980124**

Priority  
• DE 9800217 W 19980124  
• DE 19713868 A 19970404

Abstract (en)  
[origin: DE19713868A1] The present invention relates to a fuel injection pump having a distributor pump piston (6) placed in a bore provided in the housing. The surface of the pump casing presents a distribution groove (12), a filling groove (18) connected with a pressure relieving chamber and a pressure equalizing surface. Said pressure equalizing surface forms in the direction of the distribution groove (12) a first release path (39) and, in the direction of the ring groove (20), a second release path (42), so that the pressure equalizing surface, which otherwise is always closed by the inner wall (5) of the bore, ensures high pressure fuel feeding on the first release path (20) in the direction of the pressure equalizing surface (36), which in turn is unloaded on the second release path (42) in the direction of the ring groove (20). Since the pressure equalizing surface (36) is located at the end opposite the distributor groove, the forces acting upon the distributor pump piston are very efficiently balanced during the high pressure discharge phase, while the pressure feed on the aforementioned release paths enables such equalizing forces to be adjusted both to the corresponding pressure level and the strain of the distributor pump piston.

IPC 1-7  
**F02M 41/12**

IPC 8 full level  
**F02M 41/12** (2006.01)

CPC (source: EP KR US)  
**F02M 41/12** (2013.01 - EP KR US); **F02M 41/125** (2013.01 - EP US)

Citation (search report)  
See references of WO 9845592A1

Designated contracting state (EPC)  
DE FR GB IT

DOCDB simple family (publication)  
**DE 19713868 A1 19981008**; CN 1084841 C 20020515; CN 1222952 A 19990714; CZ 358698 A3 19990317; DE 59804032 D1 20020613; EP 0906506 A1 19990407; EP 0906506 B1 20020508; JP 2000512362 A 20000919; KR 20000016237 A 20000325; US 6152708 A 20001128; WO 9845592 A1 19981015

DOCDB simple family (application)  
**DE 19713868 A 19970404**; CN 98800425 A 19980124; CZ 358698 A 19980124; DE 59804032 T 19980124; DE 9800217 W 19980124; EP 98907857 A 19980124; JP 54221498 A 19980124; KR 19980709808 A 19981202; US 19491598 A 19981204