

Title (en)  
PISTON PUMP

Title (de)  
KOLBENPUMPE

Title (fr)  
POMPE A PISTONS

Publication  
**EP 0791129 B1 19980902 (FR)**

Application  
**EP 95939324 A 19951106**

Priority  
• FR 9501452 W 19951106  
• FR 9413507 A 19941107

Abstract (en)  
[origin: WO9614496A1] A device consisting of two piston pumps for supplying two separate liquid systems, particularly a fuel injection system and an oil system in an internal combustion engine. The device includes a single housing containing the pump bodies; a single drive shaft (10) with cams (11) for controlling both pumps; an oil pump piston assembly (20) wherein each oil pump piston (20) is engaged by the cam (11) and urged away from the shaft (10), and biased in the opposite direction by a spring (23); and an injection pump piston assembly (30) moving perpendicularly to the oil pump pistons (20), wherein each injection pump piston (30) is engaged by a cam (11) and urged away then returned, by means of a C-shaped member (31) of which the open side faces the corresponding oil pump piston (20), and the ends of said C-shaped member (31) comprise a piston guide (33) and a piston rod (32) respectively, said rod and guide being coaxial and each piston rod (32) being slidable in a cylinder (35) with a port (45) that defines the start of injection with one end of the rod (32) having a sloping surface (47), and the end of injection with a hole (42) in the rod (32).

IPC 1-7  
**F01M 1/02**; F02M 63/00

IPC 8 full level  
**F01M 1/02** (2006.01); **F02M 59/10** (2006.01); **F02M 63/00** (2006.01)

CPC (source: EP US)  
**F01M 1/02** (2013.01 - EP US); **F02M 59/102** (2013.01 - EP US); **F02M 63/0001** (2013.01 - EP US)

Designated contracting state (EPC)  
DE GB IT

DOCDB simple family (publication)  
**WO 9614496 A1 19960517**; CN 1171833 A 19980128; DE 69504531 D1 19981008; EP 0791129 A1 19970827; EP 0791129 B1 19980902; FR 2726606 A1 19960510; FR 2726606 B1 19961206; US 6109894 A 20000829

DOCDB simple family (application)  
**FR 9501452 W 19951106**; CN 95197272 A 19951106; DE 69504531 T 19951106; EP 95939324 A 19951106; FR 9413507 A 19941107; US 83639197 A 19970826