

Title (en)

Radial piston pump with improved efficiency for high pressure fuel supply in injection systems of internal combustion engines

Title (de)

Radialkolbenpumpe zur Kraftstoffhochdruckversorgung bei Einspritzsystemen von Brennkraftmaschinen mit verbessertem Wirkungsgrad

Title (fr)

Pompe a pistons radiaux à rendement amélioré pour alimentation haute pression en carburant dans des systemes d'injection de moteurs a combustion interne

Publication

**EP 1375915 A1 20040102 (DE)**

Application

**EP 03003558 A 20030217**

Priority

DE 10229396 A 20020629

Abstract (en)

The pump has three cylinders (17) set in the housing (23) 120 degrees apart. Each piston has a hemispherical inner end (59) engaging a shoe which engages on a triangular ring (31) on an eccentric shaft. Two galleries (51a,51b) connect the working ends of two cylinders. The first has a side branch leading to a magnetic control valve (15) which releases fuel back to the inlet via a reservoir. The second is connected to a relief valve (55).

Abstract (de)

Es wird eine Radialkolbenpumpe (1) mit in einem Pumpengehäuse (23) eingesetzten Pumpenelementen (17) und mit einem Mengensteuerventil (15) beschrieben, deren Wirkungsgrad im Teillastbereich verbessert wird. <IMAGE>

IPC 1-7

**F04B 1/04**; **F02M 37/04**

IPC 8 full level

**F02M 35/12** (2006.01); **F02M 59/06** (2006.01); **F02M 59/10** (2006.01); **F02M 59/36** (2006.01); **F02M 59/44** (2006.01); **F04B 1/04** (2006.01); **F04B 49/24** (2006.01)

CPC (source: EP)

**F02M 55/04** (2013.01); **F02M 59/06** (2013.01); **F02M 59/102** (2013.01); **F02M 59/366** (2013.01); **F02M 59/44** (2013.01); **F04B 1/0404** (2013.01); **F04B 49/24** (2013.01)

Citation (search report)

- [A] DE 19830302 A1 19991104 - BOSCH GMBH ROBERT [DE]
- [A] US 6186120 B1 20010213 - GUENTERT JOSEF [DE], et al
- [A] WO 0039450 A1 20000706 - BOSCH GMBH ROBERT [DE], et al
- [A] DE 19924064 A1 20001130 - HYDRAULIK RING GMBH [DE]

Cited by

CN102762859A; GB2569172A; GB2569172B; DE102007002730A1; DE102007002730B4; WO2009115356A1; WO2011101203A1

Designated contracting state (EPC)

DE FR IT

DOCDB simple family (publication)

**EP 1375915 A1 20040102**; **EP 1375915 B1 20071226**; DE 10229396 A1 20040122; DE 50308878 D1 20080207

DOCDB simple family (application)

**EP 03003558 A 20030217**; DE 10229396 A 20020629; DE 50308878 T 20030217