

Title (en)  
High pressure fuel pump assembly

Title (de)  
Hochdruckkraftstoffpumpenanordnung

Title (fr)  
Ensemble de pompe à carburant haute pression

Publication  
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Application  
**EP 12165506 A 20120425**

Priority  
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Abstract (en)  
The present invention relates to a high pressure fuel pump assembly (1) for an internal combustion engine. A follower roller (39) is provided for engaging a cam (41) provided on a rotatable driveshaft (43). A shoe (19), which is guided in a shoe guide (21) having a guide face (55), cooperates with the follower roller (39) for reciprocating a fuel pump plunger (3). The shoe (19) has an upper side (25) and a lower side (27); a part cylindrical recess (37) being formed on the lower side (27) for cooperating with the follower roller (39). At least one aperture (57, 59; 59'; 59", 61; 63) is provided in the shoe guide (21) and/or the shoe (19) to form at least one fluid pathway for maintaining fluid communication between the upper and lower sides (25, 27) of the shoe (19). The present invention also relates to a shoe (19) and a shoe guide (21).

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**F02M 37/04** (2013.01 - KR); **F02M 59/00** (2013.01 - KR); **F02M 59/02** (2013.01 - KR); **F02M 59/102** (2013.01 - EP); **F04B 1/0426** (2013.01 - EP)

Citation (applicant)  
• US 7568461 B1 20090804 - STRAUB ROBERT D [US]  
• US 4209079 A 19800624 - DESCHAMPS BERNARD [FR], et al

Citation (search report)  
• [X] EP 1319831 A2 20030618 - BOSCH GMBH ROBERT [DE]  
• [X] DE 102007003125 A1 20080717 - BOSCH GMBH ROBERT [DE]  
• [X] DE 102010042488 A1 20120419 - BOSCH GMBH ROBERT [DE]  
• [X] DE 102010042509 A1 20120419 - BOSCH GMBH ROBERT [DE]  
• [X] DE 102008002195 A1 20091210 - BOSCH GMBH ROBERT [DE]

Cited by  
CN106150806A; GB2551203A; GB2551203B; EP3318746A1; FR3052819A1; RU2746697C2; EP2915994A1; GB2543500A; GB2568674A; GB2543500B; GB2568674B; WO2015132052A1; WO2016150650A1; WO2017211480A1; WO2017029295A1; WO2017194622A1; WO2017216321A1; US10174733B2; EP3191711B1

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