

Title (en)  
High pressure pump

Title (de)  
Hochdruckpumpe

Title (fr)  
Pompe haute pression

Publication  
**EP 2821646 A1 20150107 (EN)**

Application  
**EP 13174546 A 20130701**

Priority  
EP 13174546 A 20130701

Abstract (en)  
A high pressure fuel pump unit (10) comprises a pump head (12), a cam-follower (24), a plunger (18) extending along a longitudinal axis (A) from a first extremity slidably arranged in a pumping bore (14) of the pump head (12) to a second extremity (22) cooperating with the cam-follower (24) lubricated by oil and, a spring (30) compressed between the pump head (12) and the cam-follower (24). The pump unit (10) further comprises an annular seal (34) arranged around the plunger (18) and fixed to the pump head (12) in order to prevent mixing of fuel with oil.

IPC 8 full level  
**F04B 1/04** (2006.01); **F04B 53/14** (2006.01)

CPC (source: EP US)  
**F04B 1/0408** (2013.01 - EP US); **F04B 1/0426** (2013.01 - EP US); **F04B 1/0448** (2013.01 - EP US); **F04B 53/02** (2013.01 - EP US); **F04B 53/14** (2013.01 - EP US); **F02M 2200/8023** (2013.01 - EP US)

Citation (search report)  
• [X] EP 2317120 A1 20110504 - MAGNETI MARELLI SPA [IT]  
• [X] US 2013104730 A1 20130502 - MAIER EBERHARD [DE], et al  
• [X] WO 2012079831 A1 20120621 - BOSCH GMBH ROBERT [DE], et al  
• [X] US 2010043760 A1 20100225 - CROFTS JOHN D [US], et al  
• [E] DE 102012204264 A1 20130919 - BOSCH GMBH ROBERT [DE]

Cited by  
JP2016133058A; DE102016203768A1; DE102016203768B4; WO2016150650A1; US10174733B2

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
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DOCDB simple family (publication)  
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DOCDB simple family (application)  
**EP 13174546 A 20130701**; CN 201480037812 A 20140604; EP 14728181 A 20140604; EP 2014061529 W 20140604; JP 2016522365 A 20140604; KR 20157034571 A 20140604; US 201414892250 A 20140604