

Title (en)  
FUEL PUMP FOR A DIRECT INJECTION SYSTEM WITH A REDUCED STRESS ON THE BUSHING OF THE PISTON

Title (de)  
KRAFTSTOFFPUMPE FÜR EIN DIREKTEINSPRITZSYSTEM MIT REDUZIERTER BELASTUNG AN DER LAUFBUCHSE DES KOLBENS

Title (fr)  
POMPE À CARBURANT DESTINÉE À UN SYSTÈME D'INJECTION DIRECTE AVEC UNE RÉDUCTION DE CONTRAINTE SUR LA BAGUE DE PISTON

Publication  
**EP 3088725 A1 20161102 (EN)**

Application  
**EP 16167581 A 20160428**

Priority  
IT BO20150210 A 20150428

Abstract (en)  
Fuel pump (4) having: a pumping chamber (14); a piston (15) slidingly mounted within the pumping chamber (14); a cylindrical containing seat (26) which is defined below the pumping chamber (14), has a diameter larger than the one of the pumping chamber (14) and is delimited on top by an annular abutment (28) which externally has the diameter of the containing seat (26) and internally has the diameter of the pumping chamber (14); and a guide bushing (27), which is housed in the containing seat (26) and has an upper surface (30) which abuts against the annular abutment (28); the upper surface (30) of the guide bushing (27) has a convex shape having an increasing height from outside to inside; and the annular abutment (28) has a step (31) against which the upper surface (30) of the guide bushing (27) rests.

IPC 8 full level  
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CPC (source: EP)  
**F02M 59/102** (2013.01); **F02M 59/44** (2013.01); **F02M 63/0265** (2013.01); **F04B 1/0439** (2013.01); **F02M 59/06** (2013.01); **F02M 59/445** (2013.01); **F02M 2200/8053** (2013.01); **F02M 2200/8061** (2013.01); **F02M 2200/9007** (2013.01)

Citation (applicant)  
• EP 2236809 A2 20101006 - MAGNETI MARELLI SPA [IT]  
• EP 1275845 A2 20030115 - BOSCH GMBH ROBERT [DE]  
• DE 102008002170 A1 20091210 - BOSCH GMBH ROBERT [DE]

Citation (search report)  
• [AD] EP 2236809 A2 20101006 - MAGNETI MARELLI SPA [IT]  
• [A] WO 2014069192 A1 20140508 - HITACHI AUTOMOTIVE SYSTEMS LTD [JP]  
• [A] DE 10322603 A1 20041209 - BOSCH GMBH ROBERT [DE]  
• [IY] EP 1275845 A2 20030115 - BOSCH GMBH ROBERT [DE]  
• [Y] DE 102008002170 A1 20091210 - BOSCH GMBH ROBERT [DE]  
• [Y] US 2008224417 A1 20080918 - BENSON DONALD J [US], et al

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