

Title (en)  
Solenoid actuator

Title (de)  
Magnetaktuator

Title (fr)  
Actionneur solénoïde

Publication  
**EP 2194543 A1 20100609 (EN)**

Application  
**EP 08170602 A 20081203**

Priority  
EP 08170602 A 20081203

Abstract (en)  
A solenoid actuator with a double action for a fuel injector comprising an armature (39), a first electromagnetic coil (33), a second electromagnetic coil (29) and a permanent magnet (27). When the first electromagnetic coil (33) is energised in use an electromagnetic field is produced which acts to move the armature (39) in a first direction. When the second electromagnetic coil (29) is energised in use the electromagnetic field produced is opposite to the magnetic field of the permanent magnet thereby cancelling out that field which acts to move the armature in a second direction.

IPC 8 full level  
**H01F 7/16** (2006.01); **F02M 63/00** (2006.01); **H01F 7/122** (2006.01)

CPC (source: EP)  
**H01F 7/1646** (2013.01); **F02M 63/0019** (2013.01); **F02M 63/0024** (2013.01); **F02M 63/0063** (2013.01); **H01F 2007/1692** (2013.01)

Citation (applicant)  
• EP 1163440 A1 20011219 - DELPHI TECH INC [US]  
• EP 1066467 A1 20010110 - DELPHI TECH INC [US]

Citation (search report)  
• [X] GB 2447769 A 20080924 - BIFOLD FLUIDPOWER LTD [GB]  
• [A] US 5351893 A 19941004 - YOUNG NIELS O [US]

Cited by  
DE102014117702A1; EP2733401A1; CN113623103A; US9689361B2; WO2011058344A1; EP2822004A1; US9530551B2

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

Designated extension state (EPC)  
AL BA MK RS

DOCDB simple family (publication)  
**EP 2194543 A1 20100609; EP 2194543 B1 20170823**

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