

Title (en)  
ELECTROMAGNETIC FUEL INJECTOR WITH HYDRAULIC BRAKING DEVICE

Title (de)  
ELEKTROMAGNETISCHER KRAFTSTOFFINJEKTOR MIT HYDRAULISCHER BREMSVORRICHTUNG

Title (fr)  
INJECTEUR ÉLECTROMAGNÉTIQUE DE CARBURANT AVEC DISPOSITIF DE FREINAGE HYDRAULIQUE

Publication  
**EP 2975256 A1 20160120 (EN)**

Application  
**EP 15176731 A 20150714**

Priority  
IT BO20140404 A 20140714

Abstract (en)  
A fuel injector (1) comprising: an injection nozzle (3); an injection valve (7) provided with a mobile plunger (17); an electromagnetic actuator (8) to move the plunger (17) between a closing position and an opening position of the injection valve (7); a hydraulic braking device (31), which is coupled to a supply hole (30) of a mobile armature (9) of the electromagnet (8), is provided with a valve element (32) which is coupled to the supply hole (30) of the mobile armature (9) and has an elastic blade (33) which is partially fixed to a surface (34) of the mobile armature (9), and is provided with a stop element (36), which is coupled to the elastic blade (33) and is arranged at a given distance from the elastic blade (33) to stop an opening movement of the elastic blade (33) itself in a fixed, predetermined position.

IPC 8 full level  
**F02M 61/20** (2006.01); **F16K 15/16** (2006.01); **F02M 51/06** (2006.01); **F02M 61/18** (2006.01)

CPC (source: EP)  
**F02M 51/0617** (2013.01); **F02M 51/0671** (2013.01); **F02M 61/205** (2013.01); **F02M 61/188** (2013.01); **F02M 2200/26** (2013.01); **F02M 2200/304** (2013.01)

Citation (applicant)  
• EP 1619384 A2 20060125 - MAGNETI MARELLI POWERTRAIN SPA [IT]  
• EP 14164844 A 20140416  
• EP 1039122 A1 20000927 - MAGNETI MARELLI SPA [IT]

Citation (search report)  
• [IY] EP 1039122 A1 20000927 - MAGNETI MARELLI SPA [IT]  
• [Y] EP 2508744 A1 20121010 - MAGNETI MARELLI SPA [IT]  
• [Y] EP 1650428 A2 20060426 - MAGNETI MARELLI POWERTRAIN SPA [IT]  
• [A] DE 10050590 A1 20010503 - AISAN IND [JP]  
• [Y] DE 102009056135 A1 20110601 - PORSCHE AG [DE]

Cited by  
EP3267026A1; KR20180006300A; CN107587963A; US11319911B2; US10550809B2

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)  
BA ME

DOCDB simple family (publication)  
**EP 2975256 A1 20160120; EP 2975256 B1 20160727; JP 2016048066 A 20160407; JP 6639820 B2 20200205**

DOCDB simple family (application)  
**EP 15176731 A 20150714; JP 2015140417 A 20150714**