

Title (en)
ELECTROMAGNETIC VALVE FOR CONTROLLING AN INJECTION VALVE OF AN INTERNAL COMBUSTION ENGINE

Title (de)
MAGNETVENTIL ZUR STEUERUNG EINES EINSPRITZVENTILS EINER BRENNKRAFTMASCHINE

Title (fr)
ELECTROVALVE POUR LA COMMANDE D'UNE SOUPAPE D'INJECTION D'UN MOTEUR A COMBUSTION INTERNE

Publication
EP 1348074 A1 20031001 (DE)

Application
EP 01990299 A 20011213

Priority
• DE 0104696 W 20011213
• DE 10065015 A 20001223

Abstract (en)
[origin: WO02052145A1] The invention relates to an electromagnetic valve for controlling an injection valve of an internal combustion engine, comprising an electromagnet (29), a moving armature with an armature plate (28) and an armature pin (27), and a control valve member (25) which is moved with the armature and which interacts with a valve seat (24), for opening and closing a fuel run-off channel (17) of a control pressure chamber (14) of the injection valve (1). The armature plate (28) is mounted in such a way as to be slideably displaceable on the armature pin (27) under the influence of its inert mass, in the closing direction of the control valve member (25), against the clamping force of a return spring (35) which acts on the armature plate (28). In its resting position, the armature plate is pressed against a stop member (26) that is located on the armature pin (27) by the return spring (35), said stop member engaging in a recess (60) on the front side (47) of the armature plate (28) facing towards the electromagnet (29). According to the invention, the stop member (26) has a cone-shaped cover wall (51) on which a complementary cone-shaped inner wall section (61) of the recess (60) of the armature plate (18) comes to rest.

IPC 1-7
F02M 47/02; F02M 59/46

IPC 8 full level
F02M 47/00 (2006.01); **F02M 47/02** (2006.01); **F02M 51/00** (2006.01); **F02M 51/06** (2006.01); **F02M 59/46** (2006.01)

CPC (source: EP US)
F02M 47/027 (2013.01 - EP US); **F02M 63/0015** (2013.01 - EP US); **F02M 63/0022** (2013.01 - EP US); **F02M 63/004** (2013.01 - EP US);
F02M 63/0043 (2013.01 - EP US); **F02M 63/007** (2013.01 - EP US); **F02M 63/0071** (2013.01 - EP US); **F02M 63/0075** (2013.01 - EP US);
F02M 63/022 (2013.01 - EP US); **F02M 2200/701** (2013.01 - EP US); **F02M 2200/803** (2013.01 - EP US); **F02M 2547/003** (2013.01 - EP US)

Citation (search report)
See references of WO 02052145A1

Designated contracting state (EPC)
DE FR IT

DOCDB simple family (publication)
WO 02052145 A1 20020704; DE 10065015 A1 20020704; EP 1348074 A1 20031001; JP 2004516418 A 20040603;
US 2003052291 A1 20030320

DOCDB simple family (application)
DE 0104696 W 20011213; DE 10065015 A 20001223; EP 01990299 A 20011213; JP 2002553010 A 20011213; US 20475902 A 20021018