

Title (en)  
SOLENOID SWITCH AND VEHICLE STARTER

Title (de)  
MAGNETSCHALTER UND FAHRZEUGANLASSER

Title (fr)  
COMMUTATEUR MAGNÉTIQUE ET DÉMARREUR DE VÉHICULE

Publication  
**EP 3021343 A1 20160518 (EN)**

Application  
**EP 15193800 A 20151110**

Priority  
CN 201410652794 A 20141117

Abstract (en)  
A vehicle starter and a solenoid switch thereof are disclosed, the solenoid switch comprising a switch casing (1); a solenoid core (3) supported by the switch casing in a manner of being movable in an axial direction; a boot (7) adapted for sealing between the solenoid core and the switch casing; and a fixing ring (8) configured to fix the boot to the switch casing. First axial retention means ((24) engaged in (18)) is provided between the boot and switch casing for maintaining the relative axial position between the boot and switch casing, and second axial retention means (25) is provided on the boot for maintaining the relative axial position between the fixing ring and the boot. Service life of the boot and the fixing ring can be prolonged.

IPC 8 full level  
**H01H 51/06** (2006.01); **F02N 15/06** (2006.01); **H01H 9/04** (2006.01)

CPC (source: EP)  
**F02N 15/021** (2013.01); **H01H 51/065** (2013.01); **H01H 2009/048** (2013.01)

Citation (search report)  
• [Y] EP 2375055 A2 20111012 - BOSCH GMBH ROBERT [DE]  
• [Y] US 2009128266 A1 20090521 - KRAMER CLAUS [DE], et al  
• [A] US 2012019340 A1 20120126 - RAMEZANIAN HOUMAN [DE], et al

Cited by  
EP3081804A4; US10163595B2; US11524871B2

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 3021343 A1 20160518; EP 3021343 B1 20200923**; BR 102015028567 A2 20160705; BR 102015028567 A8 20180814; BR 102015028567 B1 20220329; CN 105679608 A 20160615; CN 105679608 B 20200313; HU E051272 T2 20210301

DOCDB simple family (application)  
**EP 15193800 A 20151110**; BR 102015028567 A 20151113; CN 201410652794 A 20141117; HU E15193800 A 20151110