

Title (en)
STARTER

Title (de)
STARTER

Title (fr)
DÉMARREUR

Publication
EP 2504562 B1 20170111 (DE)

Application
EP 10779796 A 20101117

Priority

- DE 102009046985 A 20091123
- EP 2010067619 W 20101117

Abstract (en)

[origin: WO2011061202A1] The invention relates to a system comprising an internal combustion machine and a starter (100) for cranking an internal combustion machine, wherein the starter (100) for cranking an internal combustion machine comprises an output shaft (2) interacting with a planetary gearbox (12), supported by at least one bearing unit, and having a flange unit (4) at one end, wherein a device for supporting an output shaft (2) having a flange unit (4) at one end by means of an intermediate bearing (5) is provided in the starter (100), comprising fixed bearings (5, 6, 7, 8, 8a) for axially securing the position of the output shaft (2) relative to the intermediate bearing (5), wherein the fixed bearings (5, 6, 7, 7a, 8, 8a) are disposed on both sides of the flange unit (4).

IPC 8 full level

F02N 15/04 (2006.01); **F02N 15/06** (2006.01)

CPC (source: EP)

F02N 15/046 (2013.01); **F02N 15/065** (2013.01)

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

DOCDB simple family (publication)

DE 102009046985 A1 20110526; CN 102639866 A 20120815; CN 102639866 B 20160824; EP 2504562 A1 20121003;
EP 2504562 B1 20170111; HU E033593 T2 20171228; WO 2011061202 A1 20110526

DOCDB simple family (application)

DE 102009046985 A 20091123; CN 201080053233 A 20101117; EP 10779796 A 20101117; EP 2010067619 W 20101117;
HU E10779796 A 20101117