

Title (en)  
STARTER DEVICE FOR AN INTERNAL COMBUSTION ENGINE

Title (de)  
STARTVORRICHTUNG FÜR BRENNKRAFTMASCHINE

Title (fr)  
DISPOSITIF DE DEMARRAGE POUR MOTEUR A COMBUSTION INTERNE

Publication  
**EP 1144863 A1 20011017 (DE)**

Application  
**EP 00975803 A 20000928**

Priority

- DE 0003390 W 20000928
- DE 19950476 A 19991020

Abstract (en)  
[origin: DE19950476A1] The invention relates to a starter device (10) for starting internal combustion engines, comprising a starter motor (11) located in an electric circuit (20) and a pinion (18) which can be inserted into a gear of the internal combustion engine, in addition to means (26) for inserting and withdrawing the pinion (18) and for opening and closing the electric circuit (20). In order to achieve a uniformly progressive pre-engaging and engaging operation with reduced engaging impact and reduced material wear to the teeth of the pinion and the ring gear, the invention provides an electric servomotor (26) as the engaging and actuating means. The output of said servomotor is connected to an insertion and withdrawal organ (22) of the pinion (18) and to a switching element (21) of the electric circuit (20).

IPC 1-7  
**F02N 15/06**

IPC 8 full level  
**F02N 15/06** (2006.01)

CPC (source: EP)  
**F02N 15/067** (2013.01)

Citation (search report)  
See references of WO 0129412A1

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)  
**DE 19950476 A1 20010517**; DE 50001542 D1 20030430; EP 1144863 A1 20011017; EP 1144863 B1 20030326; ES 2194787 T3 20031201; WO 0129412 A1 20010426

DOCDB simple family (application)  
**DE 19950476 A 19991020**; DE 0003390 W 20000928; DE 50001542 T 20000928; EP 00975803 A 20000928; ES 00975803 T 20000928