

Title (en)

Starter for internal-combustion engine of an automotive vehicle

Title (de)

Anlasser für Verbrennungsmotor eines Kraftfahrzeugs

Title (fr)

Démarreur pour moteur thermique de véhicule automobile

Publication

EP 0604323 B1 19960313 (FR)

Application

EP 93403162 A 19931223

Priority

FR 9215634 A 19921223

Abstract (en)

[origin: EP0604323A1] The invention proposes a starter (10) for a combustion engine, particularly for a motor vehicle engine, of the type comprising an electric motor (14) and an electromagnetic actuator (12) of parallel axes and which are fixed to a starter chassis including at least one starter tip (11) forming a cap which envelops the end of the output member (34) of the electromagnetic actuator and the free end (28) of the shaft (26) of the motor (14) which carries a throw-in device (30), and of the type comprising an actuating lever (32) which controls the axial displacements of the throw-in device (30) and which is mounted pivotably about an axis (X-X) substantially perpendicular to the axes of the motor and of the electromagnetic actuator, characterised in that the actuating lever (32) includes an articulation pin, each of the ends (46) of which is mounted so that it can pivot in a two-part bearing including a first bearing part (48) connected to the tip of the starter (11) and a second bearing part which is complementary (50) and formed opposite it in a component (60) connected to the casing (22, 24) of the motor (14) and/or to the casing (18, 20) of the electromagnetic actuator (12). <IMAGE>

IPC 1-7

F02N 15/06

IPC 8 full level

F02N 15/06 (2006.01)

CPC (source: EP US)

F02N 15/067 (2013.01 - EP US); **Y10T 74/132** (2015.01 - EP US)

Cited by

DE19724616B4

Designated contracting state (EPC)

DE ES GB IT

DOCDB simple family (publication)

EP 0604323 A1 19940629; **EP 0604323 B1 19960313**; BR 9305105 A 19940628; DE 69301815 D1 19960418; DE 69301815 T2 19960725; ES 2086206 T3 19960616; FR 2699605 A1 19940624; FR 2699605 B1 19950210; JP H06213115 A 19940802; TR 27843 A 19950831; US 5469753 A 19951128

DOCDB simple family (application)

EP 93403162 A 19931223; BR 9305105 A 19931217; DE 69301815 T 19931223; ES 93403162 T 19931223; FR 9215634 A 19921223; JP 32716693 A 19931224; TR 108093 A 19931118; US 17242593 A 19931222