

Title (en)

MOTOR VEHICLE STARTER WITH REDUCTION GEAR COMPRISING MEANS FORMING TORSIONAL DAMPER

Title (de)

ANLASSER FÜR KRAFTFAHRZEUG MIT UNTERSETZUNGSGETRIEBE MIT TORSIONS DÄMPFUNG FORMENDEN MITTELN

Title (fr)

DEMARREUR DE VEHICULE AUTOMOBILE A REDUCTEUR A ENGRENAGES COMPORTANT DES MOYENS FORMANT AMORTISSEUR DE TORSION

Publication

**EP 1058786 B1 20040804 (FR)**

Application

**EP 99959501 A 19991220**

Priority

- FR 9903209 W 19991220
- FR 9816310 A 19981223

Abstract (en)

[origin: FR2787833A1] The invention concerns a motor vehicle starter (10) comprising a housing (18) wherein is arranged an electric motor (12) driving in rotation a coaxial starter (22) with an interposed reduction gear (34) with planetary gear train including a ring (44) made of rigid material (M1) housed at least partly in a cavity (58) of the housing and comprising a cylindrical annular skirt (46) internally toothed and closed at its axial front end by a radially oriented transverse wall (50) pierced in its centre (52) to allow through an output shaft (42) of the reduction gear; the ring (44) comprises studs (P) moulded in a flexible material (M2), in particular an elastomer material, which are interposed between the toothed ring (44) and matching portions (68) of the housing (16, 18) cavity (58) to lock the toothed ring (44) in rotation relatively to the housing (18) and provide a torsional damping function between those two elements (44, 18).

IPC 1-7

**F02N 15/04**

IPC 8 full level

**F02N 15/04** (2006.01)

CPC (source: EP KR US)

**F02N 15/04** (2013.01 - KR); **F02N 15/046** (2013.01 - EP US); **Y10T 74/137** (2015.01 - EP US)

Designated contracting state (EPC)

DE ES GB IT

DOCDB simple family (publication)

**FR 2787833 A1 20000630; FR 2787833 B1 20010302**; BR 9908154 A 20001031; CN 1205408 C 20050608; CN 1291259 A 20010411; DE 69919135 D1 20040909; DE 69919135 T2 20050120; EP 1058786 A1 20001213; EP 1058786 B1 20040804; KR 100671579 B1 20070118; KR 20010041146 A 20010515; US 6490940 B1 20021210; WO 0039454 A1 20000706

DOCDB simple family (application)

**FR 9816310 A 19981223**; BR 9908154 A 19991220; CN 99803220 A 19991220; DE 69919135 T 19991220; EP 99959501 A 19991220; FR 9903209 W 19991220; KR 20007009195 A 20000821; US 62270900 A 20000822