

Title (en)

Starter for motor vehicle with epicyclic reduction gear having a torque limiter

Title (de)

Anlasser für Motorfahrzeug mit epizyklischen Untersetzungsgetriebe und Momentbegrenzer

Title (fr)

Démarrreur de véhicule automobile à réducteur à train épicycloïdal comportant un dispositif limiteur de couple

Publication

**EP 0854284 B1 20030326 (FR)**

Application

**EP 98100399 A 19980112**

Priority

FR 9700512 A 19970116

Abstract (en)

[origin: EP0854284A1] The starter consists of an electric motor (10) with its output shaft (16) turning a starter drive assembly via a reduction gear (26). An epicyclic gear train (20,60,68) is positioned in a cylindrical housing (24) in which a toothed crown wheel (58) meshing with internal teeth of the gear train is connected to the housing via a friction torque limiter (80). The torque limiter is formed between the lateral surface of the crown wheel and an internal flange (30) in the housing which are pressed together elastically by a truncated conical spring (98). The crown wheel can have two opposite friction faces, with the second one interacting with a thrust ring (96), and the crown wheel itself is made from a material with good friction properties and a high resistance to wear.

IPC 1-7

**F02N 15/04**

IPC 8 full level

**F02N 15/04** (2006.01)

CPC (source: EP US)

**F02N 15/046** (2013.01 - EP US); **Y10T 74/134** (2015.01 - EP US); **Y10T 74/137** (2015.01 - EP US)

Cited by

FR2803345A1; FR2797109A1; US6664652B2; WO0150016A1

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**EP 0854284 A1 19980722; EP 0854284 B1 20030326**; CN 1118623 C 20030820; CN 1190153 A 19980812; DE 69812446 D1 20030430; DE 69812446 T2 20031127; ES 2196402 T3 20031216; FR 2758370 A1 19980717; FR 2758370 B1 19990305; US 6076413 A 20000620

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**EP 98100399 A 19980112**; CN 98104245 A 19980114; DE 69812446 T 19980112; ES 98100399 T 19980112; FR 9700512 A 19970116; US 486898 A 19980109