Title (en)

STARTER WITH A PLANETARY GEAR REDUCTION GEAR MECHANISM

Title (de)

ANLASSER MIT PLANETENUNTERSETZUNGSGETRIEBE

Title (fr)

DEMARREUR DOTE D'UN MECANISME REDUCTEUR D'ENGRENAGE PLANETAIRE

Publication

EP 0757176 A4 19971029 (EN)

Application

EP 95937190 A 19951124

Priority

- JP 9502408 W 19951124
- JP 9401986 W 19941124

Abstract (en)

[origin: WO9616265A1] In a starter with a planetary gear reduction gear mechanism, since a first output shaft locking member (a locking member (10), a washer (20)) and a second output shaft locking member (a pinion locking ring (250)) are mounted on an output shaft (220) in such a manner that a bearing supporting portion of a housing (400) for supporting one end of the output shaft (220) is sandwiched from the front and rear in an axial direction, and since the thrust loads at the front and rear of the output shaft (220) in the axial direction are borne by front and rear end faces of the bearing supporting portion of the housing (400), the axially rearward movement of the output shaft (220) is not restricted by the rear end face of a center bracket (360) and a motor bulkhead (800), while the axially rearward movement of the output shaft (220) is securely restricted, thereby making it possible to prevent the center bracket (360) from being disformed.

IPC 1-7

F02N 11/00; F02N 15/02; F02N 15/06

IPC 8 full level

F02N 15/02 (2006.01); **F02N 11/00** (2006.01); **F02N 15/06** (2006.01)

CPC (source: EP KR)

F02N 11/00 (2013.01 - KR); **F02N 15/02** (2013.01 - KR); **F02N 15/06** (2013.01 - EP); **F02N 15/067** (2013.01 - EP)

Citation (search report)

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- [A] WO 9114095 A1 19910919 - BOSCH GMBH ROBERT [DE]
- [A] GB 964675 A 19640722 - LUCAS INDUSTRIES LTD
- See references of WO 9616265A1

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CN104174459A

Designated contracting state (EPC)

DE ES FR GB IT

DOCDB simple family (publication)

WO 9616265 A1 19960530; AU 1076895 A 19960617; AU 3936895 A 19960617; AU 689977 B2 19980409; BR 9506567 A 19970902; CN 1065316 C 20010502; CN 1066245 C 20010523; CN 1139473 A 19970101; CN 1139474 A 19970101; DE 69525940 D1 20020425; DE 69525940 T2 20021114; EP 0757176 A1 19970205; EP 0757176 A4 19971029; EP 0757176 B1 20020320; ES 2170810 T3 20020816; JP 3147381 B2 20010319; JP H09508191 A 19970819; KR 100288306 B1 20010601; KR 970700820 A 19970212; WO 9616267 A1 19960530

DOCDB simple family (application)

JP 9502408 W 19951124; AU 1076895 A 19941124; AU 3936895 A 19951124; BR 9506567 A 19951124; CN 95191340 A 19951124; CN 95191341 A 19951124; DE 69525940 T 19951124; EP 95937190 A 19951124; ES 95937190 T 19951124; JP 51076196 A 19951124; JP 52224395 A 19941124; JP 9401986 W 19941124; KR 19960703847 A 19960716