

Title (en)
Pull-Start Engine with a Lubricating Unit

Title (de)
Seilstart-Brennkraftmaschine mit Schmierungseinheit

Title (fr)
Moteur du type à lanceur à rappel avec unité de lubrification

Publication
EP 1878909 A1 20080116 (EN)

Application
EP 06116880 A 20060710

Priority
EP 06116880 A 20060710

Abstract (en)
A pull-start engine includes a crankcase unit (2), a pull-start unit (3), a gearbox unit (4), and a lubricating unit (5) . The crankcase unit (2) includes a crankcase and a crankshaft (23). The gearbox unit (4) includes a gearbox (41) and a drive shaft (42). The pull-start unit (3) is sleeved fixedly on the crankshaft (23) . A surrounding wall (33) of the pull-start unit (3) has an inner wall surface formed with an annular inner slot (331) communicated with a lubricant passage (231) in the crankshaft (23), an outer wall surface formed with a through hole (332) communicated with the inner slot (331), and two annular flanges (333) flanking the through hole (332) so as to define an annular outer slot therebetween. The lubricating unit (5) includes an entrance passage (51) formed in the crankcase and communicated with the outer slot, and a connecting passage (52) formed in the crankcase and the gearbox (41) and communicated with the outer slot and a lubricant passage (421) in the drive shaft (42).

IPC 8 full level
F02N 15/00 (2006.01); **F01M 5/02** (2006.01); **F02N 3/02** (2006.01); **F16H 3/66** (2006.01)

CPC (source: EP)
F01M 1/06 (2013.01); **F01M 11/02** (2013.01); **F02N 3/02** (2013.01); **F02N 15/00** (2013.01); **F02N 15/006** (2013.01); **F01M 2001/062** (2013.01)

Citation (search report)
• [X] US 5558059 A 19960924 - YOSHINAGA KEI [JP], et al
• [A] US RE32620 E 19880308
• [A] US 4736809 A 19880412 - KUMAZAWA TOSHIHARU [JP]

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)
AL BA HR MK YU

DOCDB simple family (publication)
EP 1878909 A1 20080116; EP 1878909 B1 20141112

DOCDB simple family (application)
EP 06116880 A 20060710