

Title (en)

Electric drive apparatus for internal combustion engines in vehicles

Title (de)

Elektrische Antriebsanordnung für Brennkraftmaschinen in Kraftfahrzeugen

Title (fr)

Dispositif d'entraînement électrique de moteurs à combustion interne pour véhicules

Publication

**EP 1046811 B1 20030409 (DE)**

Application

**EP 00103675 A 20000222**

Priority

DE 19918513 A 19990423

Abstract (en)

[origin: EP1046811A1] The drive has an electric starter (11) for coupling to the engine (10) and an electrical generator (12) with a drive couplin the engine and connected to a power supply battery (14) via a semiconducting circuit (13) enabling the generator to be operated generator or as a motor. An electronic controller (15) controls the starting process using the generator operated as a motor wit without the starter depending on the signal from at least one temp. sensor (17,18).

IPC 1-7

**F02N 11/04**

IPC 8 full level

**F02N 11/04** (2006.01)

CPC (source: EP US)

**F02N 11/006** (2013.01 - EP US); **F02N 11/04** (2013.01 - EP US); **F02N 19/005** (2013.01 - EP US); **F02N 2019/008** (2013.01 - EP US)

Cited by

EP1355062A3; DE102007022301A1

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

**EP 1046811 A1 20001025; EP 1046811 B1 20030409**; DE 19918513 C1 20001102; DE 50001674 D1 20030515; US 6418899 B1 20020716

DOCDB simple family (application)

**EP 00103675 A 20000222**; DE 19918513 A 19990423; DE 50001674 T 20000222; US 54958900 A 20000414