

Title (en)

HYDRAULIC BEARING AND MOTOR VEHICLE WITH SUCH A HYDRAULIC BEARING

Title (de)

HYDROLAGER SOWIE KRAFTFAHRZEUG MIT EINEM DERARTIGEN HYDROLAGER

Title (fr)

PALIER HYDRAULIQUE ET VÉHICULE AUTOMOBILE ÉQUIPÉ D'UN TEL PALIER HYDRAULIQUE

Publication

EP 3158219 A1 20170426 (DE)

Application

EP 15713928 A 20150409

Priority

- DE 102014211955 A 20140623
- EP 2015057659 W 20150409

Abstract (en)

[origin: WO2015197215A1] The invention relates to a hydraulic bearing (2) with a support spring (36), a working chamber (4) which is at least partly surrounded by the support spring (36) and which is filled with a hydraulic fluid, a control membrane (12) which is designed to change a working chamber volume of the working chamber (4), and an electromagnetic actuator (16) for deflecting the control membrane (12), wherein the actuator (16) comprises a stator (18) and an armature (20) which can be moved in the longitudinal direction L of the stator (18); the armature (20) is mechanically connected to the control membrane (12); the stator (18) has a stator conductive element (26) made of a ferromagnetic material; the stator conductive element (26) has an upper stator collar (32) which extends in the transverse direction Q of the stator (18) and a lower stator collar (28) which extends in the transverse direction Q of the stator (18); the armature (20) has an armature conductive element (72) made of a ferromagnetic material; the armature conductive element (72) has an upper armature collar (58) which extends in the transverse direction Q of the stator (18) and a lower armature collar (54) which extends in the transverse direction Q of the stator (18); the upper stator collar (32) and the upper armature collar (58) face each other; and the lower stator collar (28) and the lower armature collar (54) face each other. The control membrane (12) is designed for a maximum deflection a in the deflection direction of the control membrane, and the mutually facing upper and/or lower collars (32, 58 or 28, 54) partly overlap over an overlap length u in the longitudinal direction L of the stator (18) such that a ratio of the overlap length u to the maximum deflection a lies between 0.1 and 1.5. The invention further relates to a motor vehicle with a corresponding hydraulic bearing (2).

IPC 8 full level

F16F 13/26 (2006.01)

CPC (source: CN EP US)

F16F 13/085 (2013.01 - US); **F16F 13/264** (2013.01 - CN EP US); **F16F 13/30** (2013.01 - US)

Citation (search report)

See references of WO 2015197215A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

DE 102014211955 A1 20151224; CN 106471275 A 20170301; CN 106471275 B 20200327; EP 3158219 A1 20170426; US 2017130801 A1 20170511; US 9951843 B2 20180424; WO 2015197215 A1 20151230

DOCDB simple family (application)

DE 102014211955 A 20140623; CN 201580034324 A 20150409; EP 15713928 A 20150409; EP 2015057659 W 20150409; US 201515319380 A 20150409