

Title (en)

HYDRAULIC VALVE FOR A SWIVEL MOTOR ADJUSTER OF A CAMSHAFT

Title (de)

HYDRAULIKVENTIL FÜR EINEN SCHWENKMOTORVERSTELLER EINER NOCKENWELLE

Title (fr)

VANNE HYDRAULIQUE POUR DÉPHASEUR À MOTEUR OSCILLANT D'UN ARBRE À CAMES

Publication

EP 3455467 A1 20190320 (DE)

Application

EP 17710875 A 20170314

Priority

- US 201662307745 P 20160314
- US 201615361404 A 20161126
- EP 2017055926 W 20170314

Abstract (en)

[origin: US2017260882A1] A piston for a hydraulic valve of a rotation phaser, wherein the piston is configured hollow cylindrical, wherein the piston is axially movable in a central opening extending along a first longitudinal axis of a housing of the hydraulic valve, wherein operating connections of the housing are opened and closed according to a position of the piston, wherein the piston includes check valves which prevent an unintentional outflow of a hydraulic fluid flowing through the piston from an inner cavity of the piston in flow through openings of the piston associated with the operating connections, wherein the piston is configured with check valves in its inner cavity that open towards its interior cavity, wherein the check valves are fixated by a spacer element that is arranged between the two check valves. The invention also relates to a hydraulic valve for a rotation phaser of a cam shaft.

IPC 8 full level

F01L 1/344 (2006.01); **F16K 15/18** (2006.01)

CPC (source: EP US)

F01L 1/34409 (2013.01 - EP US); **F01L 1/3442** (2013.01 - EP US); **F15B 13/0426** (2013.01 - US); **F16K 11/0716** (2013.01 - EP US);
F16K 15/026 (2013.01 - EP US); **F16K 15/18** (2013.01 - US); **F01L 2001/34426** (2013.01 - EP US); **F01L 2001/3443** (2013.01 - EP US);
F01L 2001/34433 (2013.01 - EP US); **F01L 2001/3444** (2013.01 - EP US); **F01L 2001/34463** (2013.01 - EP US);
F01L 2001/34469 (2013.01 - EP US)

Citation (search report)

See references of WO 2017157900A1

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)

EP 3219943 A1 20170920; EP 3219943 B1 20190925; DE 102017104688 A1 20170914; EP 3455467 A1 20190320; US 10041385 B2 20180807;
US 2017260882 A1 20170914; WO 2017157900 A1 20170921

DOCDB simple family (application)

EP 17159492 A 20170307; DE 102017104688 A 20170307; EP 17710875 A 20170314; EP 2017055926 W 20170314;
US 201615361404 A 20161126