

Title (en)
DEVICE FOR PRESSURE REGULATION OF HYDRAULIC PUMPS

Title (de)
VORRICHTUNG ZUR DRUCKREGELUNG VON HYDRAULIKPUMPEN

Title (fr)
DISPOSITIF POUR REGULER LA PRESSION DE POMPES HYDRAULIQUES

Publication
EP 1463888 B1 20060517 (DE)

Application
EP 02806046 A 20021209

Priority

- DE 10200977 A 20020112
- DE 10223659 A 20020528
- DE 10230040 A 20020704
- DE 10237801 A 20020817
- IB 0205187 W 20021209

Abstract (en)
[origin: WO03058071A1] A pressure-regulation device for hydraulic pumps, in particular lubricating oil pumps on an internal combustion engine in motor vehicles is disclosed, which works in a variable pressure regulation range depending on the oil pressure requirement by means of a regulating piston with a controlled force application. Using an engine-speed-dependent oil pressure regulation in oil pumps with a supply amount regulation, significant advantages can be achieved in oil pump drive power, such that the fuel consumption of the corresponding internal combustion engine may be reduced. The above is achieved whereby a regulating piston and a regulating spring are provided for control of the supply amount regulator and a control device for the regulating piston is provided. The regulating piston (14, 51, 80) comprises a working area (15, 53, 90) for a permanent oil pressure and may be subjected to an additional force by the control device (23, 29, 56,71, 73).

IPC 8 full level
F04C 2/14 (2006.01); **F01M 1/02** (2006.01); **F01M 1/16** (2006.01); **F01M 1/20** (2006.01); **F04C 14/00** (2006.01); **F04C 14/18** (2006.01); **F16N 13/20** (2006.01)

CPC (source: EP US)
F01M 1/16 (2013.01 - EP US); **F01M 1/20** (2013.01 - EP US); **F04C 14/185** (2013.01 - EP US); **F04C 2270/052** (2013.01 - EP US)

Cited by
EP2066904B1

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

DOCDB simple family (publication)
WO 03058071 A1 20030717; AT E326633 T1 20060615; AU 2002367332 A1 20030724; DE 50206845 D1 20060622; EP 1463888 A1 20041006; EP 1463888 B1 20060517; JP 2005526204 A 20050902; JP 4381816 B2 20091209; US 2005142006 A1 20050630

DOCDB simple family (application)
IB 0205187 W 20021209; AT 02806046 T 20021209; AU 2002367332 A 20021209; DE 50206845 T 20021209; EP 02806046 A 20021209; JP 2003558349 A 20021209; US 50034105 A 20050217