

Title (en)  
A VARIABLE DISPLACEMENT LUBRICANT PUMP

Title (de)  
SCHMIERMITTELPUMPE MIT VARIABLER VERDRÄNGUNG

Title (fr)  
POMPE À LUBRIFIANT À CYLINDRÉE VARIABLE

Publication  
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Application  
**EP 15797106 A 20151119**

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Abstract (en)  
[origin: WO2017084710A1] The invention refers to a variable displacement lubricant pump (10) fluidically coupled to and mechanical driven by an Internal combustion engine (12) for pumping pressurized lubricant to the engine (12). The pump comprises a pump rotor (44) with radially slidable vanes (46) rotating in a shiftable control ring (42) being radially shiftable or pivotable with respect to the rotor axis (47) between a high pumping volume position and a low pumping volume position, and a pressure control system for controlling the discharge pressure of the pressurized lubricant. The pressure pump's control system comprises a pressure control chamber (54) for pushing the control ring (42) into high pumping volume direction, a pressure conduit (66, 68) for connecting an actual pickup pressure source with the pressure control chamber (54), and a pressure control valve (78) controlling the pressure in the pressure control chamber (54). The pressure control valve (78) comprises a control plunger (86), an input pressure plunger (90) and a control spring (92). The pressure pump's control system further comprises a fluidic set value control valve (96) which is switchable between an open and a closed state, wherein in the opened state the set value control valve (96) fluidically connects a first discharge port (94) of the pressure control valve (78) and an input pressure chamber (88) of the pressure control valve (78) with a lubricant tank (60).

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