

Title (en)
LUBRICATION SYSTEM FOR HYDRAULIC PUMPS

Title (de)
SCHMIERSYSTEM FÜR HYDRAULIKPUMPEN

Title (fr)
SYSTEME DE GRAISSAGE POUR POMPES HYDRAULIQUES

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Application
EP 99948470 A 19990928

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Abstract (en)
[origin: WO0019067A2] In order to protect bearings which support the journals of pumping gears, hydraulic gear pumps have operating parameters restricted by temperature. Typically, these pumps do not operate at temperatures above about 210 DEG F. There is, however, a need for hydraulic gear pumps which can pump hydraulic fluid having a temperature which may be as high as about 250 DEG F without adversely affecting the bearings. In order to pump hydraulic fluid at these temperatures, the present invention connects the return line of the system in which the pump is used to a lubrication chamber at one end of a journal supporting one of the pumping gears. The hydraulic fluid which has been cooled by the heat exchanger is then drawn by low pressure in a low pressure region of a pump inlet opening, through an interface between bearings supporting the gear journals and the gear journals themselves. In this way, bearings and gear journals are lubricated with hydraulic fluid having a temperature substantially lower than hydraulic fluid in a return line or tank.

[origin: WO0019067A2] The present invention connects a return line (44) of the system in which the pump (10) is used to a lubrication chamber (18) at one end of a journal (30) supporting one of the pumping gears (20) in order to pump high temperature hydraulic fluid. The hydraulic fluid which has been cooled by a heat exchanger (50) is then drawn by low pressure in a low pressure region (65) of a pump inlet opening (16), through an interface (60) between bearings (34) supporting the gear journals (30) and the gear journals themselves. In this way, bearings (34) and gear journals (30) are lubricated with hydraulic fluid having a temperature substantially lower than hydraulic fluid in a return line or tank.

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• See references of WO 0019067A2

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