

Title (en)

METHOD AND APPARATUS FOR OILING ROTATING OR OSCILLATING COMPONENTS

Title (de)

VERFAHREN UND VORRICHTUNG ZUR ÖLSCHMIERUNG VON ROTIERENDEN ODER OSZILLIERENDEN BAUTEILEN

Title (fr)

PROCÉDÉ ET DISPOSITIF DE LUBRIFICATION À L'HUILE DE COMPOSANTS ROTATIFS OU OSCILLANTS

Publication

**EP 2409005 B1 20180815 (DE)**

Application

**EP 10713597 A 20100319**

Priority

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Abstract (en)

[origin: WO2010106179A1] A method for heating a lubricating system. At low temperatures, lubricating oil has a high viscosity which requires more energy to be overcome than at higher temperatures. The novel method speeds up the heating behavior and thereby reduces the energy requirement of lubricating systems. The invention relates to a method for heating lubricating systems (16), in particular for combustion engines (30) or transmissions, preferably automatic transmissions, comprising at least one oil suction tube (2) which is disposed in an oil sump (1) and an oil bypass line (23) bypassing the oil return lines (19). A bypass valve (17) is disposed in the oil bypass line (23). The oil bypass line (23) and/or at least one of the oil return lines (19) is connected to the suction line of an oil pump (3) and the pressure line of a lubricating system (16) and, during use, runs in a combustion engine (30), preferably through at least one cylinder head (12), a cylinder block (15), or a turbocharger (24), and during use in a transmission it preferably runs through at least one heat exchanger (8) of the combustion engine (30) and/or through at least one electrical heating element. When a defined limit temperature is no longer met and a defined minimum pressure of the lubricating oil in the pressure line of the lubricating system (16) is exceeded, the bypass valve (17) is opened at least partially, so that a partial flow of the lubricating oil does not flow through the oil sump (1) during the warm-up phase of the lubricating system (16). The lubricating oil flowing through the oil bypass line (23) and/or at least one of the oil return lines (19) is heated by a heat exchanger (8). The method is particularly suited for quickly heating combustion engines and transmissions in motor vehicles.

IPC 8 full level

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- EP 0123620 A1 19841031 - RENAULT [FR]
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- JP S59183017 A 19841018 - AISAN IND
- DE 102007020807 A1 20081113 - AUDI AG [DE]

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