

Title (en)
COOLING AND PREHEATING PROCESS AND SYSTEM

Title (de)
EINRICHTUNG UND VERFAHREN ZUM KÜHLEN UND VORWÄRMEN

Title (fr)
PROCEDE ET SYSTEME DE REFROIDISSEMENT ET DE PRECHAUFFAGE

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Application
EP 97940120 A 19970823

Priority

- DE 19637817 A 19960917
- EP 9704604 W 19970823

Abstract (en)
[origin: DE19637817A1] A cooling and preheating system, in particular for gear oil in an internal combustion engine, has a compensating container, at least one radiator which can be switched on by an engine thermostat when a predetermined temperature in the cooling circuit is reached, and a water/oil heat exchanger. Also disclosed is a cooling and preheating process. In order to more effectively cool and preheat oil with a more compact and cost-effective design, the forward flow (1) of a single water/oil heat exchanger (5) in the heating phase can be branched off the main cooling circuit (12) of the internal combustion engine (17) by means of a valve unit (3), and the same forward flow (1) can be taken in the cooling phase essentially in the coolant secondary flow (13) by means of the same valve unit (3) from the low temperature area (14) of the radiator (4) or from a separate low temperature radiator (14a) connected in the secondary flow downstream of the radiator (4; 4a). The disclosed process provides for the forward flow (1) of the water/oil heat exchanger (5) to be taken in the heating phase essentially from the main coolant stream (12), which does not flow through the radiator (4). At a temperature slightly below the switching point of the main engine thermostat (9), the cooling mode is switched on. In the cooling mode, the forward flow (1) of the water/oil heat exchanger (5) is branched essentially off the low temperature area (14) of the radiator (4) or off another low temperature radiator (14a) connected in the secondary flow downstream of the radiator (4, 4a).

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See references of WO 9812425A1

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