

Title (en)
MECHANICAL AUTOMOTIVE COOLANT PUMP

Title (de)
MECHANISCHE KFZ-KÜHLMITTELPUMPE

Title (fr)
POMPE À FLUIDE DE REFROIDISSEMENT POUR AUTOMOBILE

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Application
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Abstract (en)
[origin: WO2013079103A1] The invention refers to a mechanical automotive coolant pump (10) with a wet friction clutch (50) being actuated by an electromagnet (26). The pump (10) comprises a rotatable shaft (16) and a pulley wheel (22) being co-rotatably supported by the shaft (16), a pump wheel (18) being supported by the shaft (16), whereby the pump wheel (18) is rotatable with respect to the shaft (16), and a shaft sealing (52) separating a wet section (12) and a dry section (14) of the pump (10). The friction clutch (50) is arranged in the wet pump section (12) and comprises a first pump wheel-connected friction ring surface (29) and a separate second pump wheel-connected friction ring surface (35), whereby both pump wheel-connected friction ring surfaces (29,35) are co-rotatably connected to the pump wheel (18), and a first shaft-connected friction ring surface (31) and a separate second shaft-connected friction ring surface (33), whereby both shaft-connected friction ring surfaces (31,33) are co-rotatably connected to the shaft (16) and are arranged opposite to the first and second pump wheel-connected friction ring surfaces (29, 35), respectively. One friction ring surface (29) is axially not shiftable and the other friction ring surfaces (31, 33, 35) are axially shiftable. A last friction ring surface (39) being the closest to the dry section (14) is axially pretensioned by a spring element (44) into the engaged direction and is provided with a ferromagnetic element (42). The electromagnet (26) is arranged axially opposite to the ferromagnetic element (42) so that the energized electromagnet (26) axially attracts the last friction ring surface (39) into the disengaged position.

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