

Title (en)
TURBO-COMPOUND SYSTEM, IN PARTICULAR OF A MOTOR VEHICLE

Title (de)
TURBO-COMPOUND-SYSTEM, INSBESONDERE EINES KRAFTFAHRZEUGS

Title (fr)
SYSTÈME DE TURBORÉCUPÉRATION, EN PARTICULIER D'UN VÉHICULE

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Application
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Abstract (en)
[origin: WO2012116787A1] The invention relates to a turbo-compound system, in particular of a motor vehicle having an internal combustion engine which has an output shaft; having an exhaust-gas power turbine which is arranged in the exhaust-gas flow of the internal combustion engine and has an impeller wheel which is mounted fixedly on a turbine shaft so as to rotate with it; the exhaust-gas power turbine is drive-connected via a step-up gear mechanism to the output shaft of the internal combustion engine, in order to transmit drive power via the step-up gear mechanism to the output shaft; having a hydrodynamic coupling which has an impeller and a turbine wheel which form, with one another, a toroidal working chamber which can be filled with working medium via an inlet, in order to transmit torque hydrodynamically from the impeller to the turbine wheel; wherein at least one gearwheel of the step-up gear mechanism is lubricated with working medium of the hydrodynamic coupling, and the step-up gear mechanism is arranged in the drive connection between the hydrodynamic coupling and the exhaust-gas power turbine. The invention is characterized in that the step-up gear mechanism is configured as a planetary gear mechanism, comprising a sun gear, at least one planetary gear, which is mounted on a planetary carrier, and an internal gear which are in engagement with one another; and a lubricant channel is arranged in the planetary carrier in order to lubricate at least the sun gear, internal gear and/or at least one planetary gear with working medium.

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