

Title (en)
HYBRID DRIVE TRAIN OF A MOTOR VEHICLE

Title (de)
HYBRIDANTRIEBSSTRANG EINES KRAFTFAHRZEUGS

Title (fr)
CHAÎNE CINÉMATIQUE HYBRIDE D'UN VÉHICULE MOTORISÉ

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Abstract (en)
[origin: WO2010029035A1] The invention relates to a hybrid drive train of a motor vehicle, comprising an internal combustion engine with a driving shaft, an electric machine (EM) that can be operated as a motor and as a generator, a stator (34; 65) and a rotor (35; 66), and a multistage planetary automatic transmission (1) or a multistage manual transmission (51, 51') with an input shaft (17; 52) and an output shaft (18; 53), the driving shaft of the internal combustion engine being connectible to the input shaft (17; 52) of the transmission (1; 51, 51') via a controllable clutch (K1), the electric machine (EM) being coaxially arranged above the input shaft (17; 52), and the rotor (35; 66) of the electric machine (EM) being permanently drive-connected to the input shaft (17; 52). The aim of the invention is to devise a drive train having a starting acceleration and climbing capacity from dead stop that equal those obtained with a conventional drive train comprising an automatic transmission and a hydrodynamic torque converter connected upstream thereof or a manual transmission having a torque converter clutch connected upstream thereof. The rotor (35; 66) of the electric machine (EM) is drive-connected to the input shaft (17; 52) of the transmission (1; 51, 51') via an input transmission stage (36; 63) of high transmission ratio ($i_{EK} > 1$) which is designed as a simple planetary gear set.

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