

Title (en)
RANGE-CHANGE TRANSMISSION OF A MOTOR VEHICLE

Title (de)
GRUPPENGETRIEBE EINES KRAFTFAHRZEUGS

Title (fr)
GROUPE-RELAIS D'UN VÉHICULE À MOTEUR

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Application
EP 14700076 A 20140107

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Abstract (en)
[origin: WO2014121957A1] The invention relates to a range-change transmission (1.1, 1.1', 1.2, 1.3, 1.3', 1.3", 1.3*, 1.4) of a motor vehicle, for example a heavy goods vehicle, which comprises a main transmission (HG; HG') that has at least one input shaft (3; 17, 18) and one output-side main shaft (4; 19), as well as at least one range group (GP, GP') arranged downstream of the main transmission (HG; HG') and between the main shaft (4; 19) and an output shaft (5), said range group (GP, GP') having a planetary structure and at least two shiftable transmission stages for different speed ranges, as well as a shiftable reverse stage for a reverse travel range. The range group (GP, GP') comprises two planetary gear sets (PS1, PS2) coupled together and each comprising one sun gear (6, 10), one planetary carrier (7, 11) carrying a plurality of planet gears (8, 12), and one ring gear (9, 13). The sun gear (10) of the second planetary gear set (PS2) and the ring gear (9) of the first planetary gear set (PS1), which are coupled to one another, can be stopped fixed to the housing for the purpose of shifting a travel range with low speeds using a first shifting clutch (L). In order to shift to a travel range with high speeds using a second shifting clutch (H), two elements of the two planetary gear sets (PS1, PS2) can be non-rotationally interconnected. The planetary carrier (7) of the first planetary gear set (PS1) and the ring gear (13) of the second planetary gear set (PS2), which are coupled to one another, can be stopped fixed to the housing for the purpose of shifting a reverse travel range using a third shifting clutch (R).

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