

Title (en)
METHOD FOR DETERMINING A MAXIMUM COEFFICIENT OF FRICTION

Title (de)
VERFAHREN ZUM ERMITTELN EINES MAXIMALEN REIBWERTES

Title (fr)
PROCEDE PERMETTANT DE DETERMINER UN COEFFICIENT DE FROTTEMENT MAXIMAL

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Application
EP 03743341 A 20030226

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Abstract (en)
[origin: WO03074337A1] Currently available systems for regulating driving dynamics, such as for example ESP or TCS, require in the driving dynamical limit range information about the actual maximum coefficient of friction (μ -max) between tires and roadway to function reliably. A proven approach is to use, once the regulation is active, the actual utilization of grip as the maximum coefficient of friction. The invention relates to a method for determining the actual maximum coefficient of friction (μ -max) independently from the activation of the regulation. According to the inventive method, values (C_x , C_y) are permanently determined that represent the utilization of grip in the longitudinal and/or transverse direction, based on measured and/or estimated variables that represent the actual longitudinal forces (F_x), lateral forces (F_y) and vertical forces (F_z) acting upon the individual wheels and tires, while using the measured or calculated actual state variables that represent the slip angle (α) and/or the slip angle velocity ($\dot{\alpha}$) and/or the longitudinal slip (γ) and/or the longitudinal slip velocity ($\dot{\gamma}$). The determined values (C_x , C_y) are compared with threshold values (S_x , S_y) and are evaluated to determine the maximum coefficient of friction (μ -max) while using additional auxiliary variables if the resulting values of comparison are smaller than the threshold values.

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