

Title (en)

METHOD FOR CHECKING THE FUNCTION OF A PRESSURE SENSOR IN THE AIR INTAKE TRACT OR EXHAUST GAS OUTLET TRACT OF AN INTERNAL COMBUSTION ENGINE DURING OPERATION, AND MOTOR CONTROL UNIT

Title (de)

VERFAHREN ZUR ÜBERPRÜFUNG DER FUNKTION EINES DRUCKSENSORS IM LUFT-ANSAUGTRAKT ODER ABGAS-AUSLASSTRAKT EINES VERBRENNUNGSMOTORS IM BETRIEB UND MOTOR-STEUERUNGSEINHEIT

Title (fr)

PROCÉDÉ DE VÉRIFICATION DE L'ACTIVITÉ D'UN CAPTEUR DE PRESSION DANS LE SYSTÈME D'ADMISSION D'AIR OU DANS LE SYSTÈME D'ÉCHAPPEMENT DE GAZ D'UN MOTEUR À COMBUSTION INTERNE EN FONCTIONNEMENT, ET UNITÉ DE GESTION DU MOTEUR

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Abstract (en)

[origin: WO2019048416A1] The invention relates to a method for checking the function of a pressure sensor (44) in the air intake tract (20) or exhaust gas outlet tract (30) of an internal combustion engine (1) during operation and to a motor control unit (50) for carrying out the method. On the basis thereof, dynamic pressure oscillations of the intake air in the air intake tract (20) or of the exhaust gas in the exhaust gas outlet tract (30) of the pertinent internal combustion engine (1) are measured during operation by means of the pertinent pressure sensor (44), and using a discrete Fourier transformation (DFT) for multiple chosen signal frequencies (SF...X), a respective value of a determined operation characteristic (Bchk\_W1...X) of the internal combustion engine (1) and deviation values (Aw\_W1...Y) of the values ascertained for the different signal frequencies (SF1...X) with respect to one another are ascertained on the basis of the obtained pressure oscillation signal (DS\_S). Based on whether ascertained deviation values (Aw\_W1...Y) fall below or exceed a specified threshold (Aw\_Gw), the proper function of the pressure sensor (44) is confirmed (DSens=ok) or a malfunction (Dsens\_Ffkt) of the pressure sensor (44) is diagnosed. Thus, a monitoring of the proper function of the pressure sensor (44) is achieved, and in the event of a malfunction, corresponding measures are taken in order to prevent a malfunction of the internal combustion engine and an emission of pollutants which is increased on the basis thereof as the case may be.

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