

Title (en)

Method for testing the switching time of O2-sensors

Title (de)

Verfahren zur Erkennung vertauscht angeschlossener O2-Sensoren

Title (fr)

Méthode pour détecter la permutation de sondes à oxygène

Publication

EP 1247966 A2 20021009 (DE)

Application

EP 02003958 A 20020222

Priority

DE 10117244 A 20010406

Abstract (en)

Fuel injection is switched off during a test interval or the fuel air ratio is altered. Reaction times (t1, t2) are measured, up to appearance of the resultant signal variation (rapid response) from the O2 sensors (3, 6). The difference (DELTA t) is formed. This enables sensor (3, 6) exchange to be recognized, when the difference undershoots a threshold or is negative. An Independent claim is included for an engine equipped to make the test. Preferred Features: In a similar variant method, reaction times are compared with a given reaction time window; it is then ascertained whether the result lies outside the window. The time to signal variation, is determined by comparison with a given signal threshold value. On detection of an exchanged sensor, an error signal is produced and/or the controller (9) is blocked. The error signal is sent to an engine management unit or to an external test unit connected to the engine.

Abstract (de)

Verfahren zur Erkennung vertauscht angeschlossener O2-Sensoren, die im Abgasstrang einer Brennkraftmaschine hintereinander angeordnet und an eine Regeleinrichtung für die Kraftstoffeinspritzung angeschlossen sind, dadurch gekennzeichnet, daß die Kraftstoffeinspritzung während eines Prüfzeitraums abgeschaltet oder das Kraftstoff-Luft-Verhältnis verändert wird und die Reaktionszeiten bis zum Auftreten der dadurch bedingten Signaländerungen der O2-Sensoren gemessen und ausgewertet werden.

IPC 1-7

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IPC 8 full level

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CPC (source: EP)

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Citation (applicant)

DE 19734670 C1 19990527 - DAIMLER CHRYSLER AG [DE]

Cited by

WO2017138873A1; US2011106396A1; FR2859241A1; EP1724458A1; CN108603433A; KR20180102679A; EP3414434A4; WO2007012608A1; WO2009089977A1; WO2020074446A1; US11053879B2; JP2011511197A

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