

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 B1 20060517 (DE)**

Application

**EP 02003958 A 20020222**

Priority

DE 10117244 A 20010406

Abstract (en)

[origin: EP1247966A2] 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.

IPC 8 full level

**F02D 41/14** (2006.01); **F02D 41/22** (2006.01); **F02D 41/12** (2006.01)

CPC (source: EP)

**F02D 41/1441** (2013.01); **F02D 41/1495** (2013.01); **F02D 41/123** (2013.01)

Cited by

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

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

**EP 1247966 A2 20021009; EP 1247966 A3 20041222; EP 1247966 B1 20060517;** DE 10117244 A1 20021107; DE 50206777 D1 20060622

DOCDB simple family (application)

**EP 02003958 A 20020222;** DE 10117244 A 20010406; DE 50206777 T 20020222