

Title (en)

A malfunction determining apparatus of an exhaust gas recirculation system

Title (de)

Vorrichtung zur Detektion einer Fehlfunktion eines Abgasrückführungssystems

Title (fr)

Dispositif pour détecter un fonctionnement défectueux d'un système de récirculation de gaz d'échappement

Publication

**EP 0812983 B1 20020130 (EN)**

Application

**EP 97108755 A 19970602**

Priority

JP 15130396 A 19960612

Abstract (en)

[origin: EP0812983A2] A malfunction determining apparatus of an exhaust gas recirculation system (1) performs an accurate determination of malfunctioning of an EGR valve (4) based on an amount of change in the actual degree of opening of the EGR valve (4). The EGR valve (4) is provided between an exhaust passage (10) and an intake passage (9) of an internal combustion engine (2) of a vehicle. An actual valve opening degree detector detects an actual valve opening degree (ELIFTD) of the EGR valve (4). A target valve opening degree calculator calculates a target valve opening degree (ETLIFTD) of the EGR valve (4). A malfunction determining part calculates an amount of change (ELIFTD-ETLIFTD1) in the actual valve opening degree (ELIFTD) when an amount of change (ETLIFTD-ETLIFTD1) in the target valve opening degree is equal to or greater than a predetermined value (  $\alpha$  ) so as to determine an occurrence of malfunction in the exhaust gas recirculation system (1) based on a comparison between the amount of change (ELIFTD-ETLIFTD1) in the actual valve opening degree (ELIFTD) and a second predetermined value (  $\beta$  ). <IMAGE>

IPC 1-7

**F02M 25/07**

IPC 8 full level

**F02M 25/07** (2006.01)

CPC (source: EP)

**F02M 26/49** (2016.02); **F02M 26/57** (2016.02); **F02M 26/47** (2016.02); **F02M 26/48** (2016.02)

Cited by

EP0837237A3; FR2836517A1; US7096861B1; EP1394400A1; CN113090421A; CN114962039A; US7100585B2; WO03071121A1

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

**EP 0812983 A2 19971217**; **EP 0812983 A3 19980701**; **EP 0812983 B1 20020130**; DE 69710127 D1 20020314; DE 69710127 T2 20020627; JP 2845198 B2 19990113; JP H09329062 A 19971222

DOCDB simple family (application)

**EP 97108755 A 19970602**; DE 69710127 T 19970602; JP 15130396 A 19960612