

Title (en)

Exhaust gas purifying system of internal combustion engine

Title (de)

Abgasreinigungssystem für eine Brennkraftmaschine

Title (fr)

Système de purification de gaz d'échappement d'un moteur à combustion interne

Publication

**EP 1061245 A2 20001220 (EN)**

Application

**EP 00112088 A 20000605**

Priority

JP 16670199 A 19990614

Abstract (en)

A catalyst is installed in an exhaust passage of an internal combustion engine. The catalyst is of a type that traps and stores NO<sub>x</sub> in the exhaust gas when the air/fuel ratio of the exhaust gas is higher than the stoichiometric ratio and reduces the stored NO<sub>x</sub> with the aid of reducing components in the exhaust gas when the air/fuel ratio of the exhaust gas is equal to or lower than the stoichiometric ratio. A detector detects operation load of the engine. A control unit includes a microprocessor that is programmed to carry out calculating the amount of the stored NO<sub>x</sub> when the air/fuel ratio of the exhaust gas is higher than the stoichiometric ratio; judging whether or not the catalyst needs recovering of the NO<sub>x</sub>-storing ability thereof in accordance with the calculated amount of the stored NO<sub>x</sub>; determining the amount of NO<sub>x</sub> to be reduced in accordance with the engine load detected by the detector; and carrying out a catalyst recovering control when the need of recovering the NO<sub>x</sub>-storing ability is judged. The catalyst recovering control is a control to keep the air/fuel ratio of the exhaust gas at a predetermined lower ratio for a predetermined period. <IMAGE>

IPC 1-7

**F02D 41/14**; **F02D 41/02**; **F01N 3/20**

IPC 8 full level

**F01N 3/08** (2006.01); **F01N 3/20** (2006.01); **F01N 3/24** (2006.01); **F01N 3/28** (2006.01); **F02D 41/02** (2006.01); **F02D 41/04** (2006.01)

CPC (source: EP)

**F01N 3/0842** (2013.01); **F02D 41/0275** (2013.01); **F02D 2200/0806** (2013.01); **F02D 2200/0811** (2013.01)

Citation (applicant)

- JP H0610725 A 19940118 - TOYOTA MOTOR CORP
- JP H06294319 A 19941021 - TOYOTA MOTOR CORP

Cited by

RU2468218C2; EP2792863A4; EP1503053A1; GB2380434A; GB2380434B; US6751947B2; US6964159B2; US7127881B2; WO03031782A1; WO0161162A1; WO2004022952A1; US6993899B2; US7007461B2; US6912844B2; US6629409B2; US6964160B2; US6769243B2; US7143574B2

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

**EP 1061245 A2 20001220**; **EP 1061245 A3 20011128**; **EP 1061245 B1 20030917**; DE 60005251 D1 20031023; DE 60005251 T2 20040408; JP 2000356124 A 20001226; JP 3812223 B2 20060823

DOCDB simple family (application)

**EP 00112088 A 20000605**; DE 60005251 T 20000605; JP 16670199 A 19990614