

Title (en)

Exhaust gas recirculating system for internal combustion engines

Title (de)

Abgasrückführungssystem für eine Brennkraftmaschine

Title (fr)

Système de recirculation de gaz d'échappement pour un moteur à combustion interne

Publication

EP 1640599 B1 20070221 (EN)

Application

EP 05017625 A 20050812

Priority

JP 2004274603 A 20040922

Abstract (en)

[origin: EP1640599A1] Provided is an EGR system (10) which can selectively cool the EGR depending on the operating condition of the engine (1), and is provided with a switching valve (15) having an improved operating stability. The switching valve (15) comprises a valve stem (32) including a first end formed with a poppet valve member (18), a second end connected to a diaphragm actuator (16) and a slidably guided intermediate portion, a cooler port valve seat (29b) communicating with the cooler passage (13b) and a bypass port valve seat (29a) communicating with the bypass passage (13a). The bypass port valve seat (29a) is located adjacent to the diaphragm actuator (16) and the cooler port valve seat (29b) is located remote from the diaphragm actuator (16), with respect to an inlet port (26) communicating with the exhaust manifold (5).

IPC 8 full level

F02M 25/07 (2006.01)

CPC (source: EP)

F02M 26/26 (2016.02); **F02M 26/55** (2016.02); **F02M 26/69** (2016.02); **F02M 26/05** (2016.02); **F02M 26/28** (2016.02); **F02M 26/50** (2016.02)

Cited by

US8047184B2; DE112009001400B4; FR2932223A1; CN106762249A; CN102400819A; EP2322786A1

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

EP 1640599 A1 20060329; **EP 1640599 B1 20070221**; DE 602005000590 D1 20070405; DE 602005000590 T2 20070621; JP 2006090167 A 20060406; JP 4091584 B2 20080528

DOCDB simple family (application)

EP 05017625 A 20050812; DE 602005000590 T 20050812; JP 2004274603 A 20040922