

Title (en)

Method for controlling idling speed of internal combustion engine

Title (de)

Methode zur Steuerung der Leerlaufdrehzahl einer Innenbrennkraftmaschine

Title (fr)

Méthode de commande du régime de ralenti d'un moteur à combustion interne

Publication

EP 1245809 B1 20090114 (EN)

Application

EP 02007155 A 20020328

Priority

JP 2001095573 A 20010329

Abstract (en)

[origin: EP1245809A2] If the driver takes foot off the accelerator while the running condition of the vehicle, an engine speed decreases to a target engine speed for an idling condition. A corrective injection amount is calculated and added on a base injection amount when the engine speed is in a vicinity of the target engine speed ($Ne_{isc} + \Delta N_2 \leq Ne < Ne_{isc} + \Delta N_1$). The corrective injection amount is calculated based on a decreasing speed dNe/dt of the Ne . The corrective amount is gradually increased by an affecting ratio coefficient KdI so that 100 % of the corrective amount is fully effective when the engine speed Ne coincides with the target engine speed Ne_{isc} . As a result, it is possible to suppress a decreasing speed of the engine speed. It is possible to prevent the engine speed from an excessive drop with respect to the target engine speed. It is possible to approach the engine speed smoothly to the target engine speed. <IMAGE>

IPC 8 full level

F02D 29/02 (2006.01); **F02D 31/00** (2006.01); **F02D 41/12** (2006.01); **F02D 41/14** (2006.01); **F02D 41/16** (2006.01)

CPC (source: EP)

F02D 31/008 (2013.01); **F02D 41/12** (2013.01); **F02D 41/16** (2013.01); **F02D 41/126** (2013.01); **F02D 2200/1012** (2013.01)

Cited by

FR2923862A1; DE102004001723A1; US7021288B2; CN103047034A; CN115142973A; US7530344B2; US6755176B2; US8336315B2; WO2006029945A1

Designated contracting state (EPC)

DE FR SE

DOCDB simple family (publication)

EP 1245809 A2 20021002; **EP 1245809 A3 20041110**; **EP 1245809 B1 20090114**; DE 60230831 D1 20090305; JP 2002295291 A 20021009

DOCDB simple family (application)

EP 02007155 A 20020328; DE 60230831 T 20020328; JP 2001095573 A 20010329