

Title (en)  
ENGINE SUCTION RATE CONTROLLER

Title (de)  
VORRICHTUNG ZUR STEUERUNG DER MOTORSAUGRATE

Title (fr)  
REGULATEUR DE REGIME D'ASPIRATION DE MOTEUR

Publication  
**EP 1422404 A4 20080514 (EN)**

Application  
**EP 02760769 A 20020828**

Priority  
• JP 0208676 W 20020828  
• JP 2001264693 A 20010831

Abstract (en)  
[origin: EP1422404A1] In an intake air-amount control system for an engine, a coupler (80) is integrally formed on a control block (28) coupled to a throttle body (17), and a bypass valve (35), a sensor (64, 73, 76) and an actuator (39) are mounted in the control block (28). An electronic control unit (84) is placed on an outer end face of the control block (28), and a synthetic resin (103) is potted into a cap (101) mounted to the control block (28) to cover the electronic control unit (84), so that the electronic control unit (84) is wrapped, and a mounted portion of the cap (101) is sealed. Thus, the inspection of the functions of the bypass control devices can be carried out before assembling of them to the throttle body, leading to an enhancement in productivity. <IMAGE>

IPC 1-7  
**F02D 9/02**; **F02D 9/10**; **F02D 33/00**; **F02B 77/00**

IPC 8 full level  
**F02D 9/02** (2006.01); **F02D 9/10** (2006.01); **F02D 35/00** (2006.01); **F02M 69/32** (2006.01); **F02B 61/02** (2006.01)

CPC (source: EP)  
**F02D 9/105** (2013.01); **F02D 9/1055** (2013.01); **F02D 9/106** (2013.01); **F02D 9/1065** (2013.01); **F02D 9/107** (2013.01); **F02D 9/1075** (2013.01); **F02B 61/02** (2013.01); **F02D 9/02** (2013.01)

Citation (search report)  
• [A] US 5711271 A 19980127 - SCHLAGMUELLER WALTER [DE], et al  
• [A] JP H09303164 A 19971125 - HITACHI LTD  
• [A] GB 2245932 A 19920115 - ROVER GROUP [GB]  
• [A] DE 4112981 A1 19921022 - BOSCH GMBH ROBERT [DE]  
• See references of WO 03021098A1

Cited by  
EP3431739A4; EP2372130A3; EP2977593A4

Designated contracting state (EPC)  
DE ES FR GB IT

DOCDB simple family (publication)  
**EP 1422404 A1 20040526**; **EP 1422404 A4 20080514**; **EP 1422404 B1 20081210**; CN 1314889 C 20070509; CN 1549891 A 20041124; DE 60230293 D1 20090122; ES 2316600 T3 20090416; JP 2003074380 A 20030312; JP 4065115 B2 20080319; TW 536579 B 20030611; WO 03021098 A1 20030313

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**EP 02760769 A 20020828**; CN 02816989 A 20020828; DE 60230293 T 20020828; ES 02760769 T 20020828; JP 0208676 W 20020828; JP 2001264693 A 20010831; TW 91119687 A 20020829