



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
10.10.2001 Bulletin 2001/41

(51) Int Cl.7: **F02D 9/16**

(43) Date of publication A2:
07.03.2001 Bulletin 2001/10

(21) Application number: **00402352.9**

(22) Date of filing: **24.08.2000**

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE
 Designated Extension States:
AL LT LV MK RO SI

(30) Priority: **03.09.1999 JP 25090899**

(71) Applicant: **HONDA GIKEN KOGYO KABUSHIKI**
KAISHA
Minato-ku Tokyo (JP)

(72) Inventors:
 • **Suzuki, Osamu**
1-4-1 Chuo, Wako-shi, Saitama-ken (JP)
 • **Hamauzu, Akiro**
1-4-1 Chuo, Wako-shi, Saitama-ken (JP)
 • **Iimuro, Akihiro**
1-4-1 Chuo, Wako-shi, Saitama-ken (JP)

(74) Representative: **Poulin, Gérard et al**
BREVALEX
3, rue du Docteur Lancereaux
75008 Paris (FR)

(54) **Intake amount control apparatus of engine**

(57) Problem

To achieve a reduction in intake resistance in an intake amount control apparatus having a throttle body such that in a fully open state of the throttle valve, the valve is not present in an intake path of the throttle body.

Solution

A throttle body 11 is provided with a fitting hole 18 having a diameter larger than a diameter of an intake path 12 and orthogonal to an axial line X of the intake path 12, the fitting hole 18 is fitted with a rotary type throttle valve 20 for rotationally moving between a fully closed position and a fully open position and the throttle valve 20 is provided with a valve hole 27 coinciding with the intake path 12 at the fully open position.

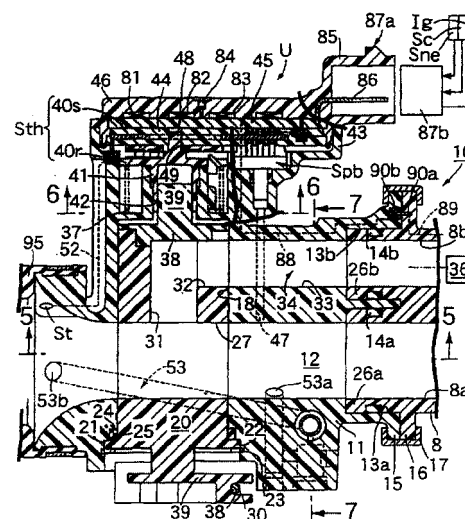


Fig. 3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 00 40 2352

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	US 5 749 335 A (FLANERY JR ANSEL BERNARD ET AL) 12 May 1998 (1998-05-12)	1	F02D9/16
Y	* column 3, line 21 - column 5, line 23; figures 1-7 *	2-4	
Y	----- PATENT ABSTRACTS OF JAPAN vol. 1998, no. 14, 31 December 1998 (1998-12-31) & JP 10 252509 A (NISSAN MOTOR CO LTD), 22 September 1998 (1998-09-22) * abstract *	2	
Y	----- US 5 666 988 A (BECKER CHRISTINE CYNTHIA) 16 September 1997 (1997-09-16) * column 1, line 56 - column 2, line 67; figure 1 *	3	
Y	----- US 5 881 695 A (APEL PETER) 16 March 1999 (1999-03-16) * column 2, line 44 - column 4, line 12; figures 1-4 *	4	
X	----- PATENT ABSTRACTS OF JAPAN vol. 1999, no. 10, 31 August 1999 (1999-08-31) & JP 11 141402 A (NIPPON UORUBUROO:KK), 25 May 1999 (1999-05-25) * abstract *	1	TECHNICAL FIELDS SEARCHED (Int.Cl.7) F02D
X	----- FR 2 757 569 A (THULIEZ JEAN LUC) 26 June 1998 (1998-06-26) * page 4, line 15 - page 5, line 27; figures 1-2B *	1	
X	----- EP 0 856 649 A (YAMAHA MOTOR CO LTD) 5 August 1998 (1998-08-05) * column 6, line 40 - column 11, line 27; figures 1-3 *	1	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 17 August 2001	Examiner Marsano, F
CATEGORY OF CITED DOCUMENTS X: particularly relevant if taken alone Y: particularly relevant if combined with another document of the same category A: technological background O: non-written disclosure P: intermediate document T: theory or principle underlying the invention E: earlier patent document, but published on, or after the filing date D: document cited in the application L: document cited for other reasons & member of the same patent family, corresponding document			

EPC FORM 1503 03.82 (P04001)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 00 40 2352

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

17-08-2001

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5749335 A	12-05-1998	NONE	
JP 10252509 A	22-09-1998	NONE	
US 5666988 A	16-09-1997	WO 9728954 A EP 0879136 A	14-08-1997 25-11-1998
US 5881695 A	16-03-1999	DE 29501451 U DE 59600188 D WO 9623965 A EP 0754269 A JP 9511309 T	14-06-1995 10-06-1998 08-08-1996 22-01-1997 11-11-1997
JP 11141402 A	25-05-1999	NONE	
FR 2757569 A	26-06-1998	NONE	
EP 0856649 A	05-08-1998	JP 10212980 A JP 10227222 A US 6131554 A US 6202626 B	11-08-1998 25-08-1998 17-10-2000 20-03-2001

EPC FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82