

(19) World Intellectual Property Organization
International Bureau



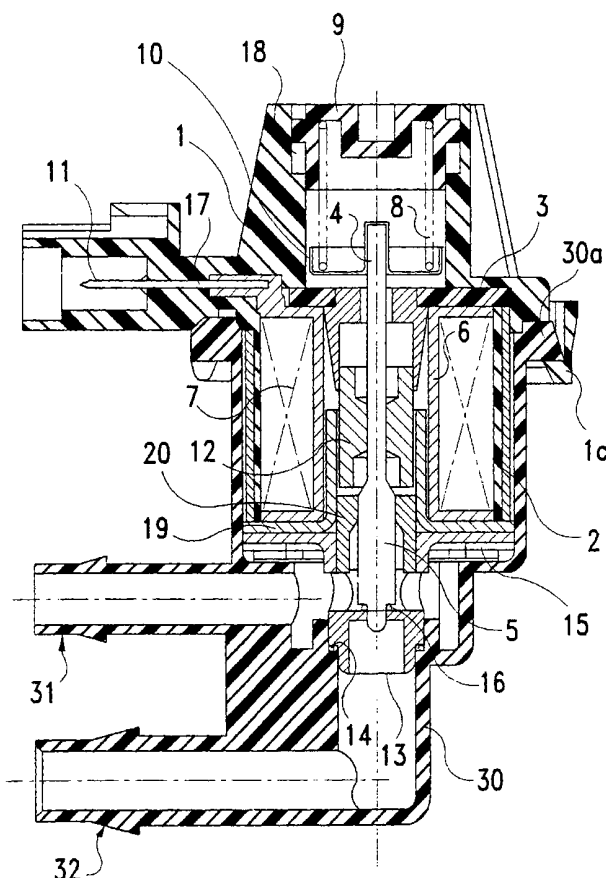
(43) International Publication Date
21 December 2000 (21.12.2000)

PCT

(10) International Publication Number
WO 00/77427 A3

- (51) International Patent Classification⁷: F16K 27/02, F02M 25/08
- (72) Inventor: BALSDON, David, William; 97 Bedford Street, Apt. 206, Chatham, Ontario N7L 2V4 (CA).
- (21) International Application Number: PCT/CA00/00717
- (74) Agent: MACRAE & CO.; P.O. Box 806, Station B, Ottawa, Ontario K1P 5T4 (CA).
- (22) International Filing Date: 14 June 2000 (14.06.2000)
- (84) Designated States (regional): European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).
- (25) Filing Language: English
- (26) Publication Language: English
- Published:
— With international search report.
- (30) Priority Data:
60/139,159 14 June 1999 (14.06.1999) US
09/592,907 13 June 2000 (13.06.2000) US
- (88) Date of publication of the international search report:
19 April 2001
- (71) Applicant: SIEMENS CANADA LIMITED [CA/CA]; 2185 Derry Road West, Mississauga, Ontario L5N 7A6 (CA).
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: CANISTER PURGE VALVE FOR HIGH REGENERATION AIRFLOW



(57) Abstract: A solenoid purge valve in which the coil is encapsulated by a plastic cap (1) that is overmolded. In addition, a calibration feature (8, 9, 10) may also be integrated with the cap and coil into a single component that can also include an electrical connector (11). The entire assembly may be adapted to be coupled, for example by snapping, to a discrete lower body portion (30) or to an intake manifold.



WO 00/77427 A3

INTERNATIONAL SEARCH REPORT

Int'l Application No

PCT/CA 00/00717

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 F16K27/02 F02M25/08

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 F02M F16K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99 05409 A (SIEMENS CANADA) 4 February 1999 (1999-02-04) page 8, line 12 - line 14 page 8, line 30 - line 42 page 10, line 28 - line 31 page 13, line 14 - page 14, line 1; figures 6,3 ----	1-20
X	EP 0 699 859 A (PEIRBURG) 6 March 1996 (1996-03-06) column 1, line 53 - line 56; figure 1 ----	1,3,6,17
X	WO 99 02848 A (SIEMENS CANADA) 21 January 1999 (1999-01-21) page 5, line 5 - page 6, line 5 ----	1-3,6,17
Y	page 7, line 24 - line 26; figure 2 ----- -/--	4,5,12, 13,16,20



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

20 September 2000

Date of mailing of the international search report

27/09/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Joris, J

INTERNATIONAL SEARCH REPORT

In ☐ International Application No

PCT/CA 00/00717

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5 809 978 A (KRIMMER) 22 September 1998 (1998-09-22) column 5, line 12 - line 58; figures 1,2 ---	4,5,12, 13,16,20
X	WO 99 05408 A (SIEMENS CANADA) 4 February 1999 (1999-02-04) page 13, line 26 -page 14, line 9; figures 6,3 ---	1-3, 6-11,14, 15,17-19
X	US 5 863 025 A (NOYA) 26 January 1999 (1999-01-26) column 3, line 7 ---	1-4,6, 12,17
A	column 3, line 25 - line 27; figure 1 ---	20
X	US 5 535 725 A (BAKER) 16 July 1996 (1996-07-16) column 4, line 21 - line 31 ---	1,6,12, 13,17
A	column 4, line 44 - line 61; figure 2 ---	20
X	EP 0 840 048 A (EATON) 6 May 1998 (1998-05-06) abstract column 1, line 24 -column 2, line 9 column 2, line 17 - line 33 column 3, line 17 - line 25 ---	1,3,6,17
A	column 3, line 35 - line 41; figure 4 ---	4,5,12, 13,20
A	DE 42 29 110 C (FREUDENBERG) 7 October 1993 (1993-10-07) figure 2 -----	1,4,6, 12,17,20

INTERNATIONAL SEARCH REPORT

Information on patent family members

In International Application No

PCT/CA 00/00717

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9905409	A	04-02-1999	AU 8327598 A EP 0998630 A	16-02-1999 10-05-2000
EP 699859	A	06-03-1996	DE 4430723 A DE 4409033 A DE 59501830 D ES 2114252 T JP 8075027 A US 5676345 A	07-03-1996 21-09-1995 14-05-1998 16-05-1998 19-03-1996 14-10-1997
WO 9902848	A	21-01-1999	US 5996559 A AU 8202398 A AU 8202498 A AU 8202598 A AU 8202698 A WO 9902845 A WO 9902846 A WO 9902847 A EP 0923667 A EP 0923668 A EP 0995029 A EP 0923670 A	07-12-1999 08-02-1999 08-02-1999 08-02-1999 08-02-1999 21-01-1999 21-01-1999 21-01-1999 23-06-1999 23-06-1999 26-04-2000 23-06-1999
US 5809978	A	22-09-1998	DE 19533742 A WO 9710427 A EP 0817911 A JP 10509228 T	13-03-1997 20-03-1997 14-01-1998 08-09-1998
WO 9905408	A	04-02-1999	AU 8203498 A EP 0998629 A	16-02-1999 10-05-2000
US 5863025	A	26-01-1999	JP 8261075 A	08-10-1996
US 5535725	A	16-07-1996	NONE	
EP 840048	A	06-05-1998	US 5941502 A CA 2217786 A JP 10132127 A	24-08-1999 30-04-1998 22-05-1998
DE 4229110	C	07-10-1993	US 5460137 A BR 9303260 A CA 2105363 A DE 59300407 D EP 0585527 A ES 2076045 T JP 2528256 B JP 6159165 A	24-10-1995 22-03-1994 02-03-1994 31-08-1995 09-03-1994 16-10-1995 28-08-1996 07-06-1994