



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
27.01.2016 Bulletin 2016/04

(51) Int Cl.:
F02M 37/10 (2006.01) F02M 37/22 (2006.01)

(43) Date of publication A2:
12.03.2014 Bulletin 2014/11

(21) Application number: **13166807.1**

(22) Date of filing: **07.05.2013**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME

- **Nemoto, Shinichi**
Shizuoka-ken, 438-8501 (JP)
- **Sakakibara, Takatomo**
Shizuoka-ken, 438-8501 (JP)
- **Tokitou, Takamasa**
Shizuoka-ken, 438-8501 (JP)

(30) Priority: **05.09.2012 JP 2012195387**

(74) Representative: **Zimmermann, Tankred Klaus**
Schoppe, Zimmermann, Stöckeler
Zinkler, Schenk & Partner mbB
Patentanwälte
Radtkoferstrasse 2
81373 München (DE)

(71) Applicant: **Yamaha Hatsudoki Kabushiki Kaisha**
Iwata-shi, Shizuoka-ken 438 (JP)

(72) Inventors:
• **Someya, Akira**
Shizuoka-ken, 438-8501 (JP)

(54) **Fuel pump unit and vehicle**

(57) A fuel pump unit (20) includes a case (31), a partition portion (32), an inlet port (44) and a fuel pump (33). The case (31) includes a discharge port (37) from which a fuel is discharged and a return port (38) to which an excess fuel is returned. The partition portion (32) divides an inner space (35) of the case (31) into a return fuel chamber (39) and a main fuel chamber (40). The return port (38) is disposed in the return fuel chamber (39). The main fuel chamber (40) is communicated with the outside of the case (31). The inlet port (44) is disposed within the return fuel chamber (39). The fuel pump (33) is configured to inhale the fuel through the inlet port (44) and discharge the fuel through the discharge port (37).

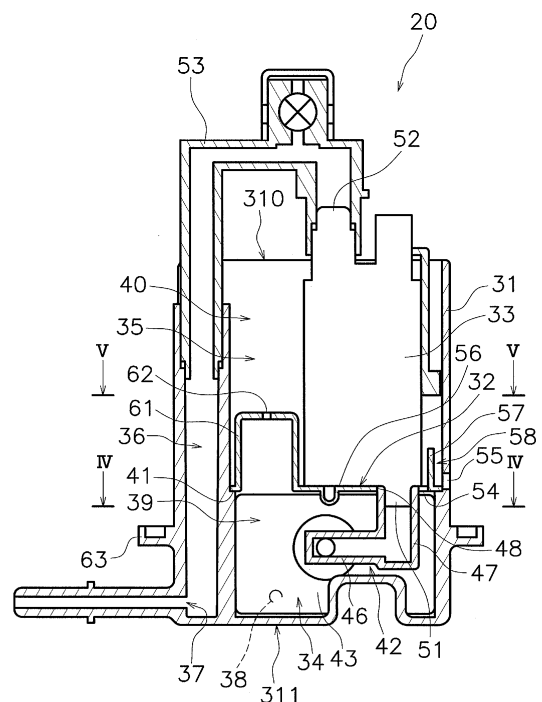


FIG. 3



EUROPEAN SEARCH REPORT

Application Number
EP 13 16 6807

5

10

15

20

25

30

35

40

45

50

55

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2007/215122 A1 (NAKAGAWA MITSUYUKI [JP] ET AL) 20 September 2007 (2007-09-20) * abstract * * page 5, paragraph 76 - paragraph 90; figure 2 *	1-6,12	INV. F02M37/10 F02M37/22
X	JP 2001 050129 A (KEIHIN CORP) 23 February 2001 (2001-02-23) * abstract; figure 1 *	1-3,12	
A	JP 2012 072663 A (HONDA MOTOR CO LTD) 12 April 2012 (2012-04-12) * the whole document *	1,12	
A	EP 1 160 444 A2 (MITSUBA CORP [JP]) 5 December 2001 (2001-12-05) * the whole document *	1,12	
A	FR 2 663 991 A1 (RENAULT [FR]) 3 January 1992 (1992-01-03) * the whole document *	1,12	
			TECHNICAL FIELDS SEARCHED (IPC)
			F02M
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		22 December 2015	Van Zoest, Peter
CATEGORY OF CITED DOCUMENTS			
<p>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</p> <p>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</p>			

2

EPO FORM 1503 03.82 (P04C01)

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

EP 13 16 6807

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.

22-12-2015

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2007215122 A1	20-09-2007	JP 4785576 B2	05-10-2011
		JP 2007247598 A	27-09-2007
		US 2007215122 A1	20-09-2007

JP 2001050129 A	23-02-2001	JP 4042267 B2	06-02-2008
		JP 2001050129 A	23-02-2001

JP 2012072663 A	12-04-2012	NONE	

EP 1160444 A2	05-12-2001	CN 1327123 A	19-12-2001
		EP 1160444 A2	05-12-2001
		JP 2002054520 A	20-02-2002

FR 2663991 A1	03-01-1992	NONE	
