

Title (en)

Device for automatically discharging water and air from fuel filters

Title (de)

Vorrichtung zur automatischen Entfernung von Wasser und Luft aus Brennstofffiltern

Title (fr)

Dispositif pour enlever automatiquement de l'eau et de l'air des filtres à carburant

Publication

EP 1081371 A3 20011024 (EN)

Application

EP 00117757 A 20000818

Priority

IT ME990006 A 19990903

Abstract (en)

[origin: EP1081371A2] The most frequent problems of water and air drainage devices designed for diesel motors are the following: a) in car motors, if water or air has to be drained from the filter, the car must be left in a garage; b) high power motor-water-separators need expensive maintenance and do not allow air discharge. The following notes show the new device peculiarity (device for immediate water and air expulsion from fuels). 1) The device is capable of detecting any kind of water by the use of one electrode (see CH. 1-2-3-9). 2) It can expell instantly even very small amounts of water. 3) Opening and closing filter plug (it has an external packing) by an electrovalve placed in the plug which has a threaded sleeve where the electrode is placed (see CH. 4-5-6). 4) Manual test available by an external pushbutton and warning light (see ch. 9) 5) A high degree of pump-depression allows water and air simultaneous discharge; in the same way, once the filter is replaced, water and fuel in excess are discharged in a few seconds by starting the device (see CH. 10 - 11). 6) The instruments-board-warning-lamp can also be used here (see CH. 8) 7) The pump can also be placed away from the filter and in high position 8) A particular filter precedes the pump (see CH. 7) <IMAGE>

IPC 1-7

F02M 37/22

IPC 8 full level

F02M 37/28 (2019.01); **F02M 37/32** (2019.01); **F02M 37/54** (2019.01)

CPC (source: EP US)

F02M 37/28 (2018.12 - EP US); **F02M 37/32** (2018.12 - EP US); **F02M 37/44** (2018.12 - EP US); **F02M 37/54** (2018.12 - EP US)

Citation (search report)

- [XY] EP 0150120 A2 19850731 - DAVCO MFG [US]
- [Y] DE 3308378 A1 19831013 - NISSAN MOTOR [JP]
- [Y] EP 0106737 A2 19840425 - FRAM CORP [US]
- [X] DE 2436080 A1 19750522 - RACOR INDUSTRIES INC
- [E] WO 0133069 A1 20010510 - UFI UNIVERSAL FILTER INT SPA [IT], et al
- [XA] GB 2038655 A 19800730 - NISSAN MOTOR, et al
- [XA] US 4522712 A 19850611 - FISCHER PAUL M [US], et al
- [XA] EP 0337861 A1 19891018 - LABINAL [FR]
- [XA] PATENT ABSTRACTS OF JAPAN vol. 008, no. 146 (M - 307) 7 July 1984 (1984-07-07)

Cited by

EP1642632A1; DE102004048565A1; US6974120B2; US8409446B2; US10508631B2; WO0196731A1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

EP 1081371 A2 20010307; EP 1081371 A3 20011024; IT 1313420 B1 20020723; IT ME990006 A1 19991203

DOCDB simple family (application)

EP 00117757 A 20000818; IT ME990006 A 19990903