

Title (en)

RECIPROCATING PUMP WITH ELECTRONICALLY MONITORED AIR VALVE AND PISTON

Title (de)

HUBKOLBENPUMPE MIT ELEKTRONISCH ÜBERWACHTEM LUFTVENTIL UND KOLBEN

Title (fr)

POMPE ALTERNATIVE POURVUE D'UNE SOUPAPE D'ADMISSION D'AIR ET D'UN PISTON COMMANDES ELECTRONIQUEMENT

Publication

EP 1907806 B1 20121024 (EN)

Application

EP 06774688 A 20060725

Priority

- US 2006028826 W 20060725
- US 70330605 P 20050728
- US 70429005 P 20050801

Abstract (en)

[origin: WO2007016081A2] An air operated pump 10 uses a magnet 14 mounted in the valve cup 16 of the air motor 18 and two reed sensors 20 mounted in the valve cover 22 to monitor the speed and position of the valve 16. A solenoid 24 is mounted on the valve cover 22 and can be commanded to extend a plunger 26 into the valve cup 16 to stop valve movement and therefore the pump from running away. A magnetoresistive sensor 34 is located in the center of the air motor 18 to precisely monitor the piston 36 position and with air valve sensors 20 provides the input necessary for precise control and diagnostics of the pump 10 and makes it suitable for metering and plural component application.

IPC 8 full level

F04B 9/125 (2006.01); **F04B 13/00** (2006.01); **G01B 9/02** (2006.01); **G01B 11/02** (2006.01); **G01J 3/45** (2006.01)

CPC (source: EP KR US)

F04B 9/08 (2013.01 - KR); **F04B 9/125** (2013.01 - EP US); **F04B 13/00** (2013.01 - EP US); **F04B 35/00** (2013.01 - KR);
F04B 49/00 (2013.01 - KR); **F01L 2003/25** (2013.01 - EP US)

Cited by

EP3599377A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 2007016081 A2 20070208; WO 2007016081 A3 20070524; WO 2007016081 A9 20070412; AU 2006275975 A1 20070208;
AU 2006275975 B2 20110825; BR PI0613878 A2 20110215; CN 101233321 A 20080730; CN 101233321 B 20100616;
EP 1907806 A2 20080409; EP 1907806 A4 20090916; EP 1907806 B1 20121024; ES 2395776 T3 20130215; JP 2009503338 A 20090129;
JP 5237804 B2 20130717; KR 101197406 B1 20121105; KR 20080038136 A 20080502; PL 1907806 T3 20130228; RU 2008107573 A 20090910;
RU 2413096 C2 20110227; TW 200726911 A 20070716; TW I475157 B 20150301; UA 89254 C2 20100111; US 2008199323 A1 20080821

DOCDB simple family (application)

US 2006028826 W 20060725; AU 2006275975 A 20060725; BR PI0613878 A 20060725; CN 200680027760 A 20060725;
EP 06774688 A 20060725; ES 06774688 T 20060725; JP 2008524063 A 20060725; KR 20087002082 A 20060725; PL 06774688 T 20060725;
RU 2008107573 A 20060725; TW 95127524 A 20060727; UA A200802598 A 20060725; US 99640206 A 20060725