

Title (en)  
PUMP

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PUMPE

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POMPE

Publication  
**EP 2802776 A4 20151209 (EN)**

Application  
**EP 11877611 A 20111222**

Priority  
CN 2011084449 W 20111222

Abstract (en)

[origin: WO2013091218A1] A pump (10) includes a drive assembly (14) having a drive shaft rotatable about a drive axis (98), and an eccentric (106) coupled to the drive shaft for rotation therewith. The eccentric (106) includes a shaft portion (118) defining an eccentric axis (122) that is offset from the drive axis (98). The shaft portion (118) includes a shaft end defining a first alignment feature (124). A piston (166) is rotatably coupled to the shaft portion (118) and defines a second alignment feature (190). A cylinder (30) reciprocatingly receives the piston (166). Positioning the first alignment feature (124) in a predetermined orientation with respect to the second alignment feature (190) locates the piston in one of a top-dead-center position and a bottom-dead-center position with respect to the cylinder (30). A method for orienting a first piston (166) and a second piston (166) in a dual piston pump (10) is also provided.

IPC 8 full level

**F04B 27/00** (2006.01); **F04B 35/04** (2006.01); **F04B 39/14** (2006.01)

CPC (source: EP US)

**F04B 1/02** (2013.01 - US); **F04B 1/0404** (2013.01 - EP US); **F04B 9/045** (2013.01 - EP US); **F04B 17/03** (2013.01 - EP US);  
**F04B 23/06** (2013.01 - EP US); **F04B 27/0404** (2013.01 - EP US); **F04B 35/04** (2013.01 - EP US); **F04B 41/06** (2013.01 - EP US)

Citation (search report)

- [X] US 2009104052 A1 20090423 - LEU SHAWN A [US], et al
- [X] WO 03016717 A1 20030227 - THOMAS INDUSTRIES INC [US], et al
- [X] FR 557006 A 19230801
- [X] CH 129676 A 19290102 - ROSSET L E [CH], et al
- See references of WO 2013091218A1

Designated contracting state (EPC)

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

DOCDB simple family (publication)

**WO 2013091218 A1 20130627**; CN 103477073 A 20131225; CN 103477073 B 20160608; EP 2802776 A1 20141119; EP 2802776 A4 20151209;  
US 2014314593 A1 20141023

DOCDB simple family (application)

**CN 2011084449 W 20111222**; CN 201180066707 A 20111222; EP 11877611 A 20111222; US 201113809613 A 20111222