

Title (en)
PUMPING ASSEMBLY

Title (de)
PUMPANORDNUNG

Title (fr)
MODULE DE POMPAGE

Publication
EP 3153702 B1 20210303 (EN)

Application
EP 16191554 A 20160929

Priority
GB 201517506 A 20151005

Abstract (en)
[origin: EP3153702A1] A pumping assembly comprising a reciprocating plunger, and a spring in a spring chamber, wherein an end of the spring abuts a spring seat which is not in contact with the plunger, thereby avoiding wear and tear of the plunger by the spring seat; the spring seat being provided by a surface of a first member located around the plunger, and wherein a second member is fixedly attached to the plunger, wherein first member location means, comprising for example a surface of a recess or spigot of a shoe, locates, and preferably centres, the first member with respect to the plunger.

IPC 8 full level
F04B 1/04 (2020.01); **F02M 59/02** (2006.01); **F02M 59/10** (2006.01)

CPC (source: EP KR)
F02M 59/02 (2013.01 - KR); **F02M 59/102** (2013.01 - EP); **F02M 59/44** (2013.01 - EP KR); **F04B 1/0404** (2013.01 - EP); **F04B 1/0408** (2013.01 - EP); **F04B 1/0426** (2013.01 - EP); **F04B 1/0439** (2013.01 - EP); **F04B 9/02** (2013.01 - KR)

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)
EP 3153702 A1 20170412; EP 3153702 B1 20210303; GB 201517506 D0 20151118; KR 102615449 B1 20231219;
KR 20170040758 A 20170413

DOCDB simple family (application)
EP 16191554 A 20160929; GB 201517506 A 20151005; KR 20160127670 A 20161004