

Title (en)

INJECTOR UNIT FOR THE INJECTION OF FUEL, AND METHOD FOR THE OPERATION OF AN INJECTOR UNIT OF THIS TYPE

Title (de)

INJEKTOREINHEIT ZUM EINSPRITZEN VON KRAFTSTOFF UND VERFAHREN ZUM BETREIBEN EINER SOLCHEN

Title (fr)

UNITÉ D'INJECTION DESTINÉE À INJECTER DU CARBURANT ET PROCÉDÉ DE FONCTIONNEMENT D'UNE TELLE UNITÉ

Publication

EP 3921536 B1 20240403 (DE)

Application

EP 20705636 A 20200211

Priority

- DE 102019103362 A 20190211
- EP 2020053395 W 20200211

Abstract (en)

[origin: WO2020165126A1] In accordance with the invention, the injector unit for the injection of fuel comprises a seat plate with a through opening which extends through the seat plate, an armature element which can be placed onto the seat plate, in order to close the through opening, a spring element which pushes the armature element in the direction of the seat plate, in order to close the through opening, an electromagnet which is designed to load the armature element with a force, in order to lift the armature element from the seat plate, and a stop for limiting a stroke of the armature element in a state in which it is lifted from the seat plate. The injector unit is characterized by a control unit which is designed to reduce an actuating signal of the electromagnet for lifting the armature element from the seat plate before the armature element makes contact with the stop for the first time after being lifted from the seat plate.

IPC 8 full level

F02M 63/00 (2006.01)

CPC (source: EP US)

F02D 41/20 (2013.01 - EP US); **F02M 47/027** (2013.01 - EP US); **F02M 63/0017** (2013.01 - EP US); **F02M 63/0075** (2013.01 - EP US); **F02D 2041/2024** (2013.01 - EP US); **F02D 2041/2037** (2013.01 - EP US); **F02D 2041/2058** (2013.01 - US)

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)

DE 102019103362 A1 20200813; CN 113454331 A 20210928; CN 113454331 B 20240712; EP 3921536 A1 20211215; EP 3921536 B1 20240403; US 2022186698 A1 20220616; WO 2020165126 A1 20200820

DOCDB simple family (application)

DE 102019103362 A 20190211; CN 202080013813 A 20200211; EP 2020053395 W 20200211; EP 20705636 A 20200211; US 202017427898 A 20200211