

Title (en)

Injection Nozzle System and Method for Operating an Injection Nozzle System

Title (de)

Einspritzdüsensystem und Verfahren zum Betreiben des Einspritzdüsensystems

Title (fr)

Système de buse à injection et procédé de fonctionnement d'un système de buse à injection

Publication

**EP 2397684 A1 20111221 (EN)**

Application

**EP 10166513 A 20100618**

Priority

EP 10166513 A 20100618

Abstract (en)

The present disclosure refers to an injection nozzle system (10) that can comprise a needle (12), a needle guide member (14) configured to guide the needle (12) between a fuel injection state and a closed state of the injection nozzle system (10), and a nozzle hood (30) configured to essentially surround the needle guide member (14) with the exception of a face of the needle guide member (14) at a nozzle holder side of the injection nozzle system (10), the nozzle hood (30) comprising a blind hole (22) fluidly connected via an opening to a high pressure fuel path of the injection nozzle system (10) and via a plurality of nozzle spray holes (24) to an outside of the nozzle hood (30), wherein in the mounted state the nozzle hood (30) and the needle guide member (14) contact each other at a first sealing zone (29) and at a second sealing zone (31) and form a gap between the hood (30) and the needle guide member (14) and the gap is limited by the first sealing zone (29) and the second sealing zone (31), and the injection nozzle system (10) comprises a pressure relief path (76, 176, 276) connecting the gap with an outside of the injection nozzle system (10) at the nozzle holder side.

IPC 8 full level

**F02M 53/04** (2006.01); **F02M 55/00** (2006.01); **F02M 61/12** (2006.01); **F02M 61/18** (2006.01); **F02M 63/00** (2006.01)

CPC (source: EP KR)

**F02M 53/04** (2013.01 - EP KR); **F02M 55/00** (2013.01 - KR); **F02M 55/002** (2013.01 - EP); **F02M 61/12** (2013.01 - EP KR); **F02M 61/18** (2013.01 - KR); **F02M 61/1806** (2013.01 - EP); **F02M 2200/02** (2013.01 - EP); **F02M 2200/06** (2013.01 - EP); **F02M 2200/90** (2013.01 - EP); **F02M 2200/95** (2013.01 - EP)

Citation (applicant)

- GB 2260374 A 19930414 - LUCAS IND PLC [GB]
- WO 2008027123 A1 20080306 - CATERPILLAR INC [US], et al
- EP 1256715 A1 20021113 - VA TECH HYDRO GMBH & CO [AT]
- EP 0961024 B1 20100113 - WAERTSILAE NSD SCHWEIZ AG [CH]
- JP S58143161 A 19830825 - ISUZU MOTORS LTD, et al

Citation (search report)

- [I] DE 19929473 A1 20001228 - BOSCH GMBH ROBERT [DE]
- [A] DE 3623364 A1 19880121 - BOSCH GMBH ROBERT [DE]
- [A] DE 4203343 C1 19930519 - MTU FRIEDRICHSHAFEN GMBH [DE]

Cited by

CN110700953A; US11230976B2

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 SE SI SK SM TR

Designated extension state (EPC)

BA ME RS

DOCDB simple family (publication)

**EP 2397684 A1 20111221**; **EP 2397684 B1 20131106**; CN 103069150 A 20130424; CN 103069150 B 20151202; KR 20130036285 A 20130411; WO 2011157374 A1 20111222

DOCDB simple family (application)

**EP 10166513 A 20100618**; CN 201180039038 A 20110608; EP 2011002817 W 20110608; KR 20137001328 A 20110608