

Title (en)  
Injection Nozzle System

Title (de)  
Einspritzdüsensystem

Title (fr)  
Système de buse à injection

Publication  
**EP 2397683 A1 20111221 (EN)**

Application  
**EP 10166505 A 20100618**

Priority  
EP 10166505 A 20100618

Abstract (en)  
The present disclosure refers to an injection nozzle system (10) that may comprise a needle (12), a needle guide member (14) comprising a bore (19) configured for guiding the needle (12) between a fuel injection state and a closed state of the injection nozzle system (10), and a nozzle hood (30) surrounding essentially 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) may comprise 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) at an injection side of the injection nozzle system (10). The bore (19) of the needle guide member (14) may be configured to provide a high pressure chamber (20) within an upper third of the needle guide member (14) next to the nozzle holder side and a high pressure supply bore (46) may be configured to connect the high pressure chamber (20) with the face of the needle guide member (14) at the nozzle holder side and to be inclined with respect to a longitudinal axis (23) of the nozzle system (10) at an angle greater than 20°.

IPC 8 full level  
**F02M 53/04** (2006.01); **F02M 61/12** (2006.01); **F02M 61/18** (2006.01); **F02M 63/00** (2006.01)

CPC (source: EP)  
**F02M 53/04** (2013.01); **F02M 61/12** (2013.01); **F02M 61/18** (2013.01); **F02M 2200/02** (2013.01); **F02M 2200/06** (2013.01); **F02M 2200/90** (2013.01); **F02M 2200/95** (2013.01)

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)  
• [XYI] DE 3623364 A1 19880121 - BOSCH GMBH ROBERT [DE]  
• [Y] JP S58143161 A 19830825 - ISUZU MOTORS LTD, et al  
• [XI] EP 0611885 A1 19940824 - NEW SULZER DIESEL AG [CH]  
• [XI] DE 19929473 A1 20001228 - BOSCH GMBH ROBERT [DE]  
• [A] DE 4203343 C1 19930519 - MTU FRIEDRICHSHAFEN GMBH [DE]  
• [A] DE 510890 C 19301024 - DEUTZ AG MOTORENFABRIK

Cited by  
US9301042B2; CN110199108A; WO2021028349A1

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 2397683 A1 20111221; EP 2397683 B1 20141203**

DOCDB simple family (application)  
**EP 10166505 A 20100618**