

Title (en)
HIGH-PRESSURE COMMON RAIL SYSTEM FOR LOW-SPEED ENGINE WITH MULTIPLE SAFETY PROTECTION FUNCTIONS

Title (de)
HOCHDRUCK-COMMON-RAIL-SYSTEM FÜR LANGSAMLAUFENDEN MOTOR MIT MEHREREN SICHERHEITSSCHUTZFUNKTIONEN

Title (fr)
SYSTÈME DE RAIL COMMUN HAUTE PRESSION POUR MOTEUR À FAIBLE VITESSE AVEC PLUSIEURS FONCTIONS DE PROTECTION DE SÉCURITÉ

Publication
EP 3819493 B1 20240103 (EN)

Application
EP 20205864 A 20201105

Priority
CN 201911088328 A 20191108

Abstract (en)
[origin: EP3819493A1] The present solution provides a high-pressure common rail system for a low-speed engine with multiple safety protection functions to achieve the multiple safety protection functions of the high-pressure common rail system. The system comprises: an ECU; an electronic control high-pressure fuel pump provided with an electronic control proportional valve configured to adjust the rate of feed of a low-pressure heavy fuel oil from a fuel tank of the low-speed engine into the electronic control high-pressure fuel pump according to a first instruction from the ECU; a first distribution block connected to the electronic control high-pressure fuel pump via a first high-pressure fuel pipe; a second distribution block connected to the first distribution block via a second high-pressure fuel pipe; and a common rail pipe connected to the second distribution block via a third high-pressure fuel pipe. A sensor connected to the ECU is mounted onto the common rail pipe. A plurality of flow limiting valve components are mounted onto the common rail pipe, and each of the flow limiting valve components is connected to one of electronic control fuel injectors via one of fourth high-pressure fuel pipes. A pressure limiting valve component is further mounted onto the common rail pipe. The first distribution block is equipped with a shut-off valve component and a safety valve component. Circulation valve components are further mounted onto the common rail pipe and onto each electronic control fuel injector.

IPC 8 full level
F02M 63/02 (2006.01); **F02D 41/38** (2006.01); **F02M 55/02** (2006.01); **F02M 59/02** (2006.01); **F02M 59/10** (2006.01); **F02M 63/00** (2006.01)

CPC (source: CN EP)
F02D 41/3082 (2013.01 - CN); **F02D 41/3827** (2013.01 - CN); **F02D 41/3845** (2013.01 - CN EP); **F02D 41/3863** (2013.01 - CN EP); **F02M 51/04** (2013.01 - CN); **F02M 55/025** (2013.01 - CN EP); **F02M 59/025** (2013.01 - CN EP); **F02M 59/102** (2013.01 - CN EP); **F02M 59/34** (2013.01 - CN); **F02M 59/44** (2013.01 - CN); **F02M 59/46** (2013.01 - CN); **F02M 59/466** (2013.01 - CN); **F02M 63/0012** (2013.01 - CN); **F02M 63/0225** (2013.01 - EP); **F02M 63/027** (2013.01 - CN EP); **F02M 63/0275** (2013.01 - EP); **F04B 53/14** (2013.01 - CN); **F02D 41/3827** (2013.01 - EP); **F02D 2200/0602** (2013.01 - EP); **F02M 63/0001** (2013.01 - EP)

Cited by
CN114439662A; CN117654982A

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 3819493 A1 20210512; EP 3819493 B1 20240103; CN 110671224 A 20200110; FI 3819493 T3 20240328

DOCDB simple family (application)
EP 20205864 A 20201105; CN 201911088328 A 20191108; FI 20205864 T 20201105