

Title (en)
INTERNAL COMBUSTION ENGINE

Title (de)
VERBRENNUNGSMOTOR

Title (fr)
MOTEUR À COMBUSTION INTERNE

Publication
EP 3168449 A1 20170517 (EN)

Application
EP 16197638 A 20161108

Priority
JP 2015222825 A 20151113

Abstract (en)
An internal combustion engine includes a cylinder block and a guide member (15). A coolant passage having an inlet opened to a water jacket is provided in an inter-bore portion of the cylinder block. The guide member (15) is disposed in the water jacket of the cylinder block. The guide member (15) is configured to guide coolant to the coolant passage.

IPC 8 full level
F02F 1/10 (2006.01); **F02F 1/14** (2006.01)

CPC (source: EP)
F02F 1/108 (2013.01); **F02F 1/14** (2013.01)

Citation (applicant)
JP 2012188959 A 20121004 - TOYOTA MOTOR CORP

Citation (search report)
• [XY] US 2005217615 A1 20051006 - MATSUTANI TAKASHI [JP], et al
• [Y] JP 2002221079 A 20020809 - HONDA MOTOR CO LTD
• [A] JP 2015108345 A 20150611 - MAZDA MOTOR
• [A] JP H0722052 U 19950421

Cited by
US2017045012A1; CN111287858A; US2017030289A1; EP3584432A4; US10683827B2; EP3584431A4; US10895219B2; US10612448B2; US10890096B2

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

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3168449 A1 20170517; EP 3168449 B1 20210811; JP 2017089563 A 20170525; JP 6718222 B2 20200708

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EP 16197638 A 20161108; JP 2015222825 A 20151113