

Title (en)
COOLANT PUMPS WHICH CAN BE COUPLED

Title (de)
KOPPELBARE KÜHLMITTELPUMPEN

Title (fr)
POMPES A LIQUIDE DE REFROIDISSEMENT POUVANT ETRE COUPLEES

Publication
EP 1529157 A1 20050511 (DE)

Application
EP 03747878 A 20030806

Priority
• DE 10237778 A 20020817
• EP 0308678 W 20030806

Abstract (en)
[origin: WO2004022939A1] The invention relates to a first coolant pump (1) of an internal combustion engine, with which a second coolant pump (2) is associated. Said two coolant pumps (1, 2) are actively connected by means of a coupling (3) with which a step-up gear (4) is associated.

IPC 1-7
F01P 7/16; **F01P 5/12**

IPC 8 full level
F01P 5/12 (2006.01); **F01P 7/16** (2006.01); **F04D 13/02** (2006.01); **F04D 13/14** (2006.01); **F01P 5/10** (2006.01)

CPC (source: EP US)
F01P 5/12 (2013.01 - EP US); **F01P 7/161** (2013.01 - EP US); **F01P 7/162** (2013.01 - EP US); **F04D 13/021** (2013.01 - EP US);
F04D 13/14 (2013.01 - EP US); **F04D 15/0072** (2013.01 - EP); **F01P 2005/105** (2013.01 - EP US)

Citation (search report)
See references of WO 2004022939A1

Designated contracting state (EPC)
DE FR GB

DOCDB simple family (publication)
DE 10237778 A1 20040304; **DE 10237778 B4 20100512**; EP 1529157 A1 20050511; US 2005188927 A1 20050901; US 7032546 B2 20060425;
WO 2004022939 A1 20040318; WO 2004022939 B1 20040513

DOCDB simple family (application)
DE 10237778 A 20020817; EP 0308678 W 20030806; EP 03747878 A 20030806; US 6230705 A 20050215