

Title (en)
INTERNALLY MESHED OIL PUMP ROTOR ASSEMBLY

Title (de)
ÖLPUMPENROTOREINHEIT MIT INNENVERZÄHNUNG

Title (fr)
ASSEMBLAGE DE ROTOR DE POMPE À HUILE À ENGRENAGE INTERNE

Publication
EP 1559912 B1 20151209 (EN)

Application
EP 03769987 A 20031029

Priority
• JP 0313880 W 20031029
• JP 2002314070 A 20021029

Abstract (en)
[origin: EP1559912A1] An oil pump rotor assembly includes an inner rotor (20) having "n" external teeth ("n" is a natural number), and an outer rotor (10) having (n+1) internal teeth which are engageable with the external teeth, the oil pump rotor assembly being used in an oil pump which, during rotation of the inner and outer rotors (20, 10), draws and discharges fluid by volume change of cells (R) formed between the inner and outer rotors (20, 10). The oil pump rotor assembly is configured such that a clearance, which is defined between the teeth of the inner and outer rotors (20, 10) that together form one of the cells (R) which has the minimum volume among the cells, is designated as "a", a clearance, which is defined between the teeth of the inner and outer rotors (20, 10) that together form one of the cells (R) whose volume is increasing during rotation of the inner and outer rotors (20, 10), is designated as "b", and a clearance, which is defined between the teeth of the inner and outer rotors (20, 10) that together form one of the cells (R) which has the maximum volume among the cells, is designated as "c", the following inequalities are satisfied: $a \leq b \leq c$, and $a < c$. <IMAGE>

IPC 8 full level
F04C 2/10 (2006.01); **F04C 2/08** (2006.01)

CPC (source: EP KR US)
F04C 2/084 (2013.01 - EP US); **F04C 2/10** (2013.01 - KR); **F04C 2/102** (2013.01 - EP US)

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)
EP 1559912 A1 20050803; EP 1559912 A4 20101208; EP 1559912 B1 20151209; CN 100451339 C 20090114; CN 1708647 A 20051214; ES 2561939 T3 20160301; HU E027489 T2 20161128; JP WO2004044430 A1 20060316; KR 20050067202 A 20050630; MY 168173 A 20181011; US 2006239848 A1 20061026; WO 2004044430 A1 20040527

DOCDB simple family (application)
EP 03769987 A 20031029; CN 200380102047 A 20031029; ES 03769987 T 20031029; HU E03769987 A 20031029; JP 0313880 W 20031029; JP 2004551196 A 20031029; KR 20057007197 A 20050426; MY PI20034113 A 20031029; US 53274205 A 20051128