

Title (en)
Improvements to rotary pumps

Title (de)
Rotationspumpe

Title (fr)
Pompe rotative

Publication
EP 0984143 A3 20010110 (EN)

Application
EP 99306909 A 19990831

Priority
GB 9819261 A 19980903

Abstract (en)
[origin: EP0984143A2] A coolant pump for an I.C. engine comprises a pump cavity housing an impeller rotatable about an axis, the impeller axis being located coaxially with the rotational axis of the crankshaft of the engine. <IMAGE>

IPC 1-7
F01P 5/10; **F04D 5/00**; **F04D 13/02**

IPC 8 full level
F01P 5/10 (2006.01); **F01P 5/12** (2006.01); **F04C 18/02** (2006.01); **F04D 5/00** (2006.01); **F04D 13/02** (2006.01); **F04D 29/04** (2006.01); **F04D 29/041** (2006.01); **F04D 29/043** (2006.01); **F04D 29/047** (2006.01); **F04D 29/62** (2006.01); **F16D 27/01** (2006.01)

CPC (source: EP KR)
F01P 5/10 (2013.01 - EP); **F04C 18/02** (2013.01 - KR); **F04D 5/002** (2013.01 - EP); **F04D 13/027** (2013.01 - EP); **F04D 29/0413** (2013.01 - EP); **F04D 29/047** (2013.01 - EP)

Citation (search report)

- [XA] US 4643135 A 19870217 - WUENSCH PETER [AT]
- [XA] US 5382833 A 19950117 - WIRGES GERHARD O [DE]
- [XA] US 5159901 A 19921103 - CHONAN MITSUGI [JP]
- [A] US 3720372 A 19730313 - JACOBS J
- [A] EP 0376901 A1 19900704 - FIAT AUTO SPA [IT]
- [A] US 5082428 A 19920121 - OKLEJAS ROBERT A [US], et al
- [A] US 5000142 A 19910319 - ARUGA TATSUO [JP], et al
- [A] PATENT ABSTRACTS OF JAPAN vol. 007, no. 183 (M - 235) 12 August 1983 (1983-08-12)

Cited by
WO2021121798A1; WO2006058607A1; WO2008019815A1

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