

Title (en)

Automotive vane-type vacuum pump

Title (de)

Flügelzellenvakuumpumpe für Automobile

Title (fr)

Pompe à vide à ailettes pour automobiles

Publication

EP 1193396 A3 20030730 (EN)

Application

EP 01107401 A 20010326

Priority

JP 2000301962 A 20001002

Abstract (en)

[origin: EP1193396A2] An automotive vane-type vacuum pump restrains seizure from taking place between an axial end surface of a rotor and a case, thereby permitting improved durability. The automotive vane-type vacuum pump for forcibly feeding a fluid from an inlet to an outlet includes a bottomed cylindrical case having an inlet and an outlet, a rotor eccentrically accommodated in the case, a shaft that is secured to the rotor, having both ends thereof rotatably supported by both bottom surfaces of the case, and rotates the rotor by an external driving force, and a vane that rotates slidably in contact with the inner peripheral surface of the case while moving in and out of the rotor as the rotor rotates. The axial movement of the shaft is restricted by slidable contact between axial movement restricting stepped portions provided on both ends of the shaft, and the case. Furthermore, a very small gap is formed between an axial end surface of the rotor and the case. <IMAGE>

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F04C 18/344

IPC 8 full level

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CPC (source: EP KR)

F01C 21/08 (2013.01 - EP); **F01C 21/104** (2013.01 - EP); **F04C 18/344** (2013.01 - KR); **F04C 18/3441** (2013.01 - EP)

Citation (search report)

- [XY] US 3819309 A 19740625 - JACOBS J
- [Y] US 2312655 A 19430302 - LAUCK JOHN A
- [Y] US 5265457 A 19931130 - HAYASHI TETSUYA [JP], et al
- [Y] WO 0036303 A1 20000622 - MITSUBISHI ELECTRIC CORP [JP] & EP 1055823 A1 20001129 - MITSUBISHI ELECTRIC CORP [JP]
- [Y] US 5667372 A 19970916 - HWANG SEON-WOONG [KR], et al
- [Y] US 5954489 A 19990921 - KINOSHITA TAKASHI [JP]

Cited by

DE102015216104B3; US9863420B2; WO2012167780A3

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