

Title (en)  
Refrigeration circuit for vehicular air conditioning systems

Title (de)  
Kühlkreislauf in einer Fahrzeugklimaanlage

Title (fr)  
Circuit de réfrigération pour une climatisation d'une voiture

Publication  
**EP 1130261 A3 20030402 (EN)**

Application  
**EP 01301484 A 20010220**

Priority  
US 51200100 A 20000224

Abstract (en)  
[origin: EP1130261A2] A vehicular air conditioning system (10) includes a compressor (110) having a crank chamber (138), a suction chamber (120), and a discharge chamber (122). A refrigerant mixture includes carbon dioxide and oil. A conduit (13) connects the discharge chamber (122) of the compressor (110) directly with an oil separator (14) to route the refrigerant mixture directly to the oil separator (14). Only a restricted orifice (16) is provided between the oil separator (14) and the crank chamber (138) of the compressor (110) to throttle oil as it travels directly to the crank chamber (138) of the compressor (110).

IPC 1-7  
**F04B 39/16**; F04B 39/06; F25B 1/02

IPC 8 full level  
**F04B 39/06** (2006.01); **F04B 39/16** (2006.01); **F25B 1/00** (2006.01); **F25B 1/02** (2006.01); **F25B 43/00** (2006.01); **F25B 9/00** (2006.01)

CPC (source: EP KR)  
**F04B 39/062** (2013.01 - EP); **F04B 39/16** (2013.01 - EP); **F25B 43/00** (2013.01 - KR); **F25B 9/008** (2013.01 - EP); **F25B 2309/061** (2013.01 - EP)

Citation (search report)

- [Y] US 5694784 A 19971209 - FREY MICHAEL [DE], et al
- [A] US 5337572 A 19940816 - LONGSWORTH RALPH C [US]
- [A] US 3945216 A 19760323 - SCHIBBYE HJALMAR
- [A] EP 0978693 A2 20000209 - SANDEN CORP [JP]
- [Y] PATENT ABSTRACTS OF JAPAN vol. 006, no. 240 (M - 174) 27 November 1982 (1982-11-27)

Cited by  
EP1600314A1; DE102004024255A1; US10598416B2

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)  
**EP 1130261 A2 20010905**; **EP 1130261 A3 20030402**; JP 2001263834 A 20010926; KR 20010085511 A 20010907

DOCDB simple family (application)  
**EP 01301484 A 20010220**; JP 2001044699 A 20010221; KR 20010009181 A 20010223