

Title (en)  
COOLING SYSTEM FOR INTERNAL-COMBUSTION ENGINES

Publication  
**EP 0100917 B1 19861001 (DE)**

Application  
**EP 83106971 A 19830715**

Priority  
DE 3226508 A 19820715

Abstract (en)  
[origin: ES8404010A1] Cooling circuit for internal combustion engines, with an excess-pressure valve which, when the cooling circuit is under full thermal load, limits the pressure in the feed to a value at which the pressure on the suction side of the coolant pump is always above the boiling pressure of the cooling medium, even at full delivery level of the coolant pump. The efficiency of the cooling function is improved as also the structural expenditure in connection with the cooling circuit is reduced thereby and also by the central arrangement, in the filling stub, respectively, the cap thereof, of additional excess-pressure and vacuum valves, of a throttle for a venting flow, of a level float switch for the filling level indication in the cooling circuit and of a blocking device against the opening of the cap which is under pressure.

IPC 1-7  
**F01P 11/02**; **F01P 3/22**

IPC 8 full level  
**F01P 3/20** (2006.01); **F01P 3/22** (2006.01); **F01P 11/00** (2006.01); **F01P 11/02** (2006.01)

CPC (source: EP US)  
**F01P 11/0247** (2013.01 - EP US); **F01P 11/0238** (2013.01 - EP US); **F01P 11/028** (2013.01 - EP US); **F01P 2011/0266** (2013.01 - EP US)

Citation (examination)  
BUSSIEN, Automobiltechnisches Handbuch, 1979, Walter de Gruyter, Berlin New York, Seite 284, Absatz II

Cited by  
FR2740830A1; DE3716555A1; FR2741132A1

Designated contracting state (EPC)  
DE FR GB IT SE

DOCDB simple family (publication)  
**EP 0157167 A1 19851009**; **EP 0157167 B1 19871021**; DE 3226508 A1 19840126; DE 3226508 C2 19851212; DE 3366593 D1 19861106; DE 3374143 D1 19871126; EP 0100917 A1 19840222; EP 0100917 B1 19861001; EP 0163006 A1 19851204; ES 524135 A0 19840416; ES 8404010 A1 19840416; JP H071005 B2 19950111; JP S5923029 A 19840206; US 4510893 A 19850416

DOCDB simple family (application)  
**EP 85102118 A 19830715**; DE 3226508 A 19820715; DE 3366593 T 19830715; DE 3374143 T 19830715; EP 83106971 A 19830715; EP 85101659 A 19830715; ES 524135 A 19830715; JP 12488883 A 19830711; US 51380283 A 19830714