

Title (en)

Module and cooling circuit comprising such a module

Title (de)

Module und Kühlungskreislauf mit solchem Modul

Title (fr)

Module et circuit de refroidissement comprenant un tel module

Publication

**EP 1380735 A1 20040114 (EN)**

Application

**EP 03015553 A 20030710**

Priority

FR 0208781 A 20020711

Abstract (en)

The present invention relates to a cooling circuit module for vehicles with an internal-combustion engine. <??>Module characterised in that it is formed by assembly, in the region of a connection plane (P) or assembly zones, of two parts (11 and 12) made of thermoplastic material(s) sandwiched together, with at least partial nesting in end portions (6, 6'; 8, 8') of at least two conduit segments juxtaposed to form at least one corresponding circulation line (3, 3') of the cooling circuit, at least one conduit portion (2; 2') containing a device (4, 4') for measuring or regulating the flow in the line (3; 3') concerned, and in that said module (24) incorporates at least the conduits forming the main circuit (15), conduit segments forming parts (20", 21") of the secondary circuits (20 and 21) and at least one part of the feed pump (17). <IMAGE>

IPC 1-7

**F01P 11/00**; F01P 5/10; F01P 7/16

IPC 8 full level

**F01P 5/10** (2006.01); **F01P 7/16** (2006.01); **F01P 11/00** (2006.01); **F01M 11/03** (2006.01); **F01P 5/12** (2006.01); **F01P 7/14** (2006.01); **F01P 11/02** (2006.01)

CPC (source: EP)

**F01P 5/10** (2013.01); **F01P 7/165** (2013.01); **F01P 11/00** (2013.01); **F01M 11/03** (2013.01); **F01M 2001/1014** (2013.01); **F01P 7/167** (2013.01); **F01P 11/029** (2013.01); **F01P 2005/125** (2013.01); **F01P 2007/146** (2013.01); **F01P 2025/06** (2013.01); **F01P 2060/04** (2013.01); **F01P 2060/08** (2013.01); **F01P 2070/00** (2013.01)

Citation (search report)

- [A] EP 1201889 A1 20020502 - MARK IV SYSTEMES MOTEURS SA [FR]
- [A] DE 4308002 C1 19940825 - IAV GMBH [DE]
- [A] US 6112706 A 20000905 - HEER SIEGFRIED [AT]
- [A] DE 4136773 C1 19921217
- [A] EP 0889211 A2 19990107 - NIPPON THERMOSTAT KK [JP]

Designated contracting state (EPC)

AT DE ES GB IT

DOCDB simple family (publication)

**EP 1380735 A1 20040114**; **EP 1380735 B1 20070905**; AT E372450 T1 20070915; DE 60316075 D1 20071018; DE 60316075 T2 20080605; ES 2290387 T3 20080216; FR 2842249 A1 20040116; FR 2842249 B1 20040924

DOCDB simple family (application)

**EP 03015553 A 20030710**; AT 03015553 T 20030710; DE 60316075 T 20030710; ES 03015553 T 20030710; FR 0208781 A 20020711