(11) **EP 2 037 097 A3** 

(12)

## **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3: 01.02.2012 Bulletin 2012/05

(51) Int Cl.: **F01P** 7/16<sup>(2006.01)</sup>

(43) Date of publication A2: 18.03.2009 Bulletin 2009/12

(21) Application number: 08163515.3

(22) Date of filing: 02.09.2008

(84) Designated Contracting States:

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

**Designated Extension States:** 

AL BA MK RS

(30) Priority: 11.09.2007 SE 0702016

(27) Previously filed application: 11.09.2007 SE 0702016

(71) Applicant: Scania CV AB 151 87 Södertälje (SE)

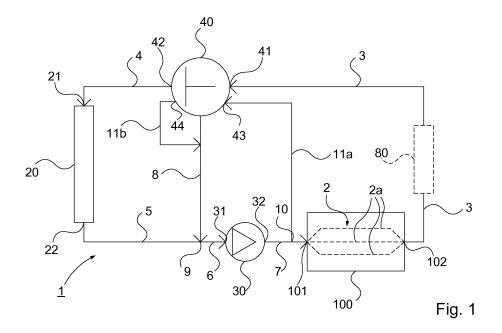
(72) Inventors:

- Söderberg, Erik
   111 29, Stockholm (SE)
- Kardos, Zoltan
   151 35, Södertälje (SE)

## (54) Cooling system and thermostat device for motor vehicle

(57) The present invention relates to a cooling system for a motor vehicle comprising a cooling circuit (2) for cooling the vehicle's engine (100) by means of a cooling medium flowing in the cooling circuit, which cooling system comprises a radiator (20) for cooling the cooling medium, means (30) for circulating the cooling medium in the cooling circuit, a thermostat device (40) comprising a valve device (52) situated downstream of the engine,

and at least one thermal element (54) which is connected to the valve device and adapted to detecting the temperature of the cooling medium in order on the basis thereof to direct the cooling medium through the radiator (20) and/or through a bypass line (8) past the radiator, the at least one thermal element (54) being situated upstream of the engine (100). The invention relates also to a thermostat device for a cooling system of a motor vehicle. The invention relates also to a motor vehicle.





## **EUROPEAN SEARCH REPORT**

Application Number

EP 08 16 3515

	DOCUMENTS CONSIDI			I	
Category	Citation of document with in of relevant passa		priate,	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Υ	EP 1 111 215 A1 (F0 [US]) 27 June 2001 * paragraphs [0031] *	(2001-06-27)		1-3,8,9, 14 4-6, 10-12	INV. F01P7/16
Х	DE 25 23 436 A1 (KL AG) 9 December 1976 * pages 5,6; figure	(1976-12-09)	LDT DEUTZ	1,2,8,14	
Υ	US 2005/061893 A1 ( 24 March 2005 (2005 * paragraph [0020]	-03-24)	JP])	4,10	
Υ	US 5 775 270 A (HUE 7 July 1998 (1998-0 * column 1, lines 2	7-07)		5,6,11, 12	
					TECHNICAL FIELDS SEARCHED (IPC) F01P G05D
	The present search report has b	een drawn up for all c	laims		
	Place of search	•	etion of the search		Examiner
	Munich	16 December 2011		Luta, Dragos	
CATEGORY OF CITED DOCUMENTS  X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background		er [ L		hed on, or	
O : non-written disclosure P : intermediate document			k : member of the sa document		

## ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 08 16 3515

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

16-12-2011

	111215		date		Patent family member(s)		Publication date
DE 2		A1	27-06-2001	DE EP	59910468 1111215		14-10-2004 27-06-2001
	523436	A1	09-12-1976	NON	 Е		
US 20	005061893	A1	24-03-2005	CN EP JP KR TW US WO	1639801 1566811 4293506 2004177249 20050084746 1264529 2005061893 2004049351	A1 B2 A A B A1	13-07-200! 24-08-200! 08-07-200! 24-06-200! 29-08-200! 21-10-200! 24-03-200!
US 5	775270	A	07-07-1998	DE EP ES JP JP KR US WO	59508587 0746807 2149388 2948916 H09509718 100191838 5775270 9619762	A1 T3 B2 A B1 A	24-08-2000 11-12-1990 01-11-2000 13-09-1990 30-09-1990 07-07-1998 27-06-1990

 $\stackrel{\text{O}}{=}$  For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

FORM P0459