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Datasheet for the decision of 6 September 2019

Case Number: T 2162/17 - 3.2.01

Application Number: 10767968.0

Publication Number: 2483090

IPC: B60H1/00, B62D25/08

Language of the proceedings: EN

Title of invention:
SUCTION UNIT OF A VEHICLE'S AIR CONDITIONING SYSTEM

Patent Proprietor:
Valeo Klimasysteme GmbH

Opponent:
MAHLE International GmbH

Headword:

Relevant legal provisions:
EPC Art. 54(2)

Keyword:
Novelty - (no)

Decisions cited:

Catchword:

Europäisches Patentamt
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Case Number: T 2162/17 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 6 September 2019

Appellant: (Patent Proprietor)	Valeo Klimasysteme GmbH Werner-von-Siemens-Strasse 6 96476 Rodach (DE)
Representative:	Metz, Gaëlle Valeo Systèmes Thermiques 8, rue Louis Lormand CS 80517 La Verrière 78322 Le Mesnil Saint Denis Cedex (FR)
Respondent: (Opponent)	MAHLE International GmbH Pragstrasse 26-46 70376 Stuttgart (DE)
Representative:	Grauel, Andreas Grauel IP Patentanwaltskanzlei Wartbergstrasse 14 70191 Stuttgart (DE)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 17 July 2017 revoking European patent No. 2483090 pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairman	G. Pricolo
Members:	V. Bevilacqua
	S. Fernández de Córdoba

Summary of Facts and Submissions

I. The appeal is from the decision of the Opposition Division revoking the European patent No. 02 483 090.

II. In coming to its decision the Opposition Division held that the subject-matter of claim 1 was not novel over

D5 : EP 1 426 216,

both as regards the patentee's main request (patent as granted) and the patentee's second auxiliary request. The patentee's first auxiliary request was rejected for lack of inventive step starting from D5 as the closest prior art.

III. Oral proceedings before the Board took place on 6 September 2019.

The appellant (patentee) requested that the decision under appeal be set aside and the patent be maintained as granted or, in the alternative, that the patent be maintained in amended form on the basis of the auxiliary request filed with letter dated 5 July 2019.

The respondent (opponent) requested that the appeal be dismissed.

IV. Claim 1 as granted reads as follows:

"1. Suction unit of a vehicle's air conditioning system, including an air flow canal (16), which has a suction opening (18) for fresh air, as well as a fan housing (28), which possesses an air inlet (29) and an air outlet (31), while the air flow canal (16) runs from the suction opening (18) to the air inlet (29),

limited by a canal wall (38) and enfolded by a water separation chamber (42), in which water drops are collected that form due to the moist air flowing through the water separation chamber (42), this water separation chamber (42) limited by canal wall segments (40) at which the condensation is collected, and at the same time, an air outlet (33) of the water separation chamber (42) is directly limited by an air filter (34) upstream from the fan housing (28), characterized in that said air flow canal (16) includes an air recirculation flap (36) with a sealable suction opening (43) for recirculating air, said air recirculation flap (36) being arranged upstream said air filter (34)".

Claim 1 according to auxiliary request 1 additionally includes the feature of granted claim 9:

"wherein the air recirculating flap (36) with a sealable suction opening (43) for recirculating air are positioned, according to the assembly condition of the suction unit in the vehicle, at the highest point of the air flow canal (16) or in the vicinity of a portion of the air flow canal (16), which shows an air flow component directed against gravity".

Reasons for the Decision

1. *Main request*

1.1 The Board concurs with the Opposition Division's findings and with the respondent's view that the subject-matter of claim 1 as granted is not novel over document D5.

1.2 The appellant criticised these findings on the grounds that D5 does not disclose the following features of claim 1 (numbering of features according to the numbering adopted by the appellant in the statement of grounds of appeal):

1.3 while the air flow canal (16) runs from the suction opening (18) to the air inlet (29)
1.3.2 enfolded by a water separation chamber (42), in which water drops are collected that form due to the moist air flowing through the water separation chamber (42),
1.4 this water separation chamber (42) limited by canal wall segments (40) at which the condensation is collected,
1.5 and at the same time, an air outlet (33) of the water separation chamber (42) is directly limited by an air filter (34) upstream from the fan housing (28).

1.3 The Board disagrees.

D5 undisputedly discloses, in the embodiment of Fig. 1, that there are a first volume 10 and a second annular volume 13, and that water separation means such as gutters or chicanes are provided in the volume 10 (see par. [0014]). Contrary to the appellant's view, and in accordance with the findings of the Opposition Division, the volumes 10 and 13 can be regarded as forming a water separating chamber. These volumes are in direct communication when the flap 8 is open and in this configuration, since the walls of one volume are contiguous to the walls of the other volume (they are part of a same casing, see claim 19, and thus are at about the same temperature), water may well condense, i.e. separate, in volume 13 as well. The fact that D5 discloses that water separation means are provided in

volume 10 (gutters or chicanes, see above) and is silent about any such specific means in volume 13 cannot be seen as implying that condensation of water in volume 13 does not take place, since condensation is a physical phenomenon which takes place depending upon air humidity and amount of cooling (due to contact of the air with the walls).

As a consequence, it is appropriate to identify in D5 an air flow canal which runs from the suction opening (which is in volume 10; see col. 3, lines 14-16) to the air inlet (at 22 in Fig. 1) of the fan housing and which is enfolded by the water separation chamber 10, 13. Furthermore, condensation results in formation of water drops in both volumes 10 and 13, and these drops are necessarily collected therein, i.e. in the water separating chamber 10, 13. Also, an air outlet of the water separation chamber 10, 13 is directly limited by an air filter 15 upstream from the fan housing 21.

It remains to be assessed whether this water separation chamber 10, 13 is limited by canal wall segments at which the condensation is collected. In the Board's judgment, this must be answered affirmatively. As a matter of fact, contrary to the appellant's view, and as pointed out by the respondent, the term "wall segments" does not imply any specific means or any specific arrangement of the canal wall in segments. According to the patent in suit, wall segments may have different properties than adjacent canal walls, see par. [0009] and claims 5 to 7, e.g. they may "possess a rougher surface than its vicinal surfaces of the canal wall" (claim 5). Such limitations are however not present in claim 1 but only in the dependent claims. Accordingly, the term "wall segments" must be given a broad interpretation whereby, as also pointed out by

the respondent, the various walls forming the volumes 10, 13, i.e. forming the water separating chamber, are to be regarded as "wall segments" at which water drops form. Furthermore, as submitted by the respondent, these water drops do not stay at the location where they form but run along the walls in particular due to gravity, i.e. condensation is collected at said walls. It is noted that the term "collected" does not imply that the condensation is "evacuated" as submitted by the appellant during the oral proceedings, nor does the claim specify that the condensation is collected at a particular location.

2. Auxiliary request

2.1 The auxiliary request corresponds to auxiliary request 2 underlying the decision under appeal, which was also rejected for lack of novelty over D5 by the Opposition Division (section 10 of the decision). The Board agrees with these findings and also shares the view of the respondent that the embodiment of Fig. 6 is particularly relevant.

Fig. 6 indeed shows, in addition to the above-mentioned features present in Fig. 1, an air recirculating flap 8b with a sealable suction opening for recirculating air (see par. [0023] and [0013]). Considering that the wall 5, separating the engine and the passenger compartments (see col. 3, lines 3-8), is essentially vertical (as correctly pointed out by the Opposition Division), and that the filter 9 inside volume 13 is annular and thus air flowing around the filter has a flow component directed against gravity in the upper portion of volume 13, and that the air recirculating flap 8b with the sealable suction opening is close to the filter 9, it follows that said flap and the

sealable suction opening are also in the vicinity of a portion of the air flow canal which shows an air flow component directed against gravity.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

A. Vottner G. Pricolo

Decision electronically authenticated