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Datasheet for the decision of 12 October 2012

Case Number: T 2199/09 - 3.2.01

Application Number: 04254687.9

Publication Number: 1623857

IPC: B60H 1/00, F25B 41/04, F25B 5/02

Language of the proceedings: EN

Title of invention:
HVAC Systems

Patentee:
Delphi Technologies, Inc.

Opponents:
Visteon Global Technologies, Inc.
Konvekta AG

Headword:
-

Relevant legal provisions (EPC 1973):
EPC Art. 56
RPBA Art. 12(4)

Keyword:
"Admission of a new document filed with the statement of grounds of appeal - power under Article 12(4) RPBA - (no)"
"Inventive step (yes)"

Decisions cited:
-

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 2199/09 - 3.2.01

D E C I S I O N
of the Technical Board of Appeal 3.2.01
of 12 October 2012

Appellant: (Opponent 01)
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Decision under appeal: **Interlocutory decision of the Opposition Division of the European Patent Office posted 11 September 2009 concerning maintenance of European patent No. 1623857 in amended form.**

Composition of the Board:

Chairman: G. Pricolo
Members: H. Geuss
T. Karamanli

Summary of Facts and Submissions

I. The appeal of opponent 01 is directed against the interlocutory decision of the opposition division, posted on 11 September 2009, concerning maintenance of European patent No. 1623857 in amended form.

II. The opposition division held that claim 1 as amended during the opposition proceedings met the requirements of Article 56 EPC 1973 having regard to the cited prior art, including:

DE 100 36 038 A1 (**E1**),
EP 1 226 990 A1 (**A1**),
DE 199 32 468 A1 (**E2**),
DE 102 43 374 A1 (**E3**),
EP 0 888 912 A2 (**A3**), and
EP 0 842 798 A2 (**E5**).

III. With the statement of grounds of appeal the appellant filed document

JP 2000 062 449 (**E12**).

IV. Oral proceedings were held on 12 October 2012.

The appellant withdrew its objections under Article 56 EPC 1973 with regard to a combination of documents E1 or A1 and E5 or a combination of documents E1 or A1 with E2 or E3 which were raised in the statement of grounds of appeal.

The appellant requested that the decision under appeal be set aside and that the European patent be revoked.

The respondent (patent proprietor) requested that the appeal be dismissed.

No one was present for the duly summoned opponent 02 (party as of right). The party as of right filed no requests in writing.

V. Claim 1 as approved by the opposition division reads as follows:

A vehicle HVAC system operable selectively in air conditioning and heat pump modes to cool and heat, respectively, a passenger compartment of a vehicle, the system comprising a refrigerant circuit including a compressor (1), an external cooler (3), and two internal heat exchanger units (6,8) located within the passenger compartment of the vehicle; characterised in that one internal heat exchanger unit (8), called rear heat exchanger unit for being able to cool and heat air in a rear part of the passenger compartment, comprises a heat exchanger used for cooling air in the air conditioning mode and for heating air in the heat pump mode and the other internal heat exchanger unit (6), called front heat exchanger unit for being able to cool and heat air in a front part of the passenger compartment, comprises separate heat exchangers, a first (6a) used for cooling air in the air conditioning mode and a second (6b) used for heating air in the heat pump mode, the second (6b) of the separate heat exchangers being bypassed in the air conditioning mode, and the first (6a) of the separate heat exchangers being bypassed in the heat pump mode.

VI. The appellant's (opponent 01's) submissions may be summarized as follows:

Document E12 should be admitted into the proceedings since this document was filed in reaction to the decision of the opposition division, in which for the first time it was stated that the implementation of the feature that a heat exchanger was used for cooling in the air conditioning mode and for heating air in the heat pump mode supported the presence of an inventive step. E12, in fact, showed that this feature was well known.

Document E1 is considered to be the closest prior art. The subject-matter of claim 1 differs from the heating, ventilating and air conditioning system (HVAC) according to E1 by the features 7) and 8) - according to the features' numbering used by the Opposition Division in the decision under appeal -, which define a heat exchanger unit for the rear compartment comprising a single heat exchanger used for both cooling and heating air.

Document E1 is concerned with the front part of the passenger compartment, and in particular with the flash fogging phenomenon, its relevance to safety aspects and its avoidance (cf. E1, paragraphs [0002] to [0004]). The objective problem to be solved is to improve the temperature management of the HVAC system according to E1 in respect of the rear part of the passenger compartment.

For the skilled person it would be obvious to improve the existing system by a further heat exchanger unit

for the rear part of the compartment. For this purpose the skilled person would consider the two possibilities which are disclosed in the prior art: separate heat exchangers for cooling and heating (cf. E5), or a single heat exchanger for both (cf. E12, E3 and A3). The skilled person, knowing that flash fogging is not relevant in the rear part compartment, would obviously select the alternative with a single heat exchanger for cooling and heating as this alternative has clear advantages in terms of space and costs.

Finally, document E12 shows a system comprising front and rear heat exchanger, each being used for both cooling and heating.

The appellant argued lack of inventive step also in view of the combination of A1 and E12, A1 representing an alternative to E1 as the starting point.

VII. The respondent (patent proprietor) replied to these arguments as follows:

Document E12 should not be allowed into the proceedings because this document was filed late and is not relevant.

With respect to the appellant's argument concerning lack of inventive step starting from document E1, it remains open why the skilled person would provide only a single rear heat exchanger. Starting from document E1, the skilled person would have several possibilities at his disposal, so that already for this reason the choice of a single heat exchanger for the rear compartment would involve an inventive step.

It is true that the skilled person faced with the objective problem of improving the temperature management system in accordance with E1 would consider modifying the existing HVAC system with particular regard to the rear passenger compartment. However, the obvious solution would be to use, for both the front and rear compartment, the same system. This corresponds to what is shown in E5 and E12. Accordingly, the obvious solution would be to duplicate the system of E1, thus providing separate heat exchangers also for the rear compartment. In E12 both the front and the rear heat exchangers are used for heating and cooling. However, since E12 does not reflect the flash fogging problem, the person skilled in the art would not consider E12 when starting from E1. Indeed E1 aims at avoiding the flash fogging problem and provides separate heat exchangers specifically for overcoming this problem.

Therefore, even if the skilled person would consider E12, there are no reasons why the skilled person starting from E1 would ignore the entire system as disclosed in E1 and why he would single out from the disclosure of E12 the feature relating to the rear heat exchanger.

Therefore the argument of the appellant is based on hindsight. The same applies when taking document A1 as an alternative starting point, the technical content thereof not going beyond that of E1.

Reasons for the Decision

1. The appeal is admissible.

2. The board finds the appellant's argument convincing that document E12 was filed with the statement setting out the grounds of appeal in reaction to the decision of the opposition division, which states that feature 8 (a heat exchanger used for cooling in the air conditioning mode and for heating air in the heat pump mode) is neither disclosed nor rendered obvious by the state of the art then on file, and that E12 was intended to show that this feature belongs to the prior art. Hence the appellant had no reason to present E12 in the first-instance proceedings. Therefore, the board had no power under Article 12(4) RPBA to hold this document inadmissible. E12 is thus taken into account in the present appeal proceedings in accordance with Article 12(4),(1) and (2) RPBA.

3. The subject-matter of claim 1 as maintained in amended form by the opposition division's decision involves an inventive step according to the provisions of Article 56 EPC 1973.

3.1 Document E1 is considered to be the closest prior art. The heating, ventilating and air conditioning system (HVAC) disclosed in E1 undisputedly differs form the subject-matter of claim 1 by features 7 and 8:

(7) one internal heat exchanger unit (8), called rear heat exchanger unit for being able to cool and heat air in a rear part of the passenger compartment, comprises

(8) a heat exchanger used for cooling in the air conditioning mode and for heating air in the heat pump mode.

3.2 It was not questioned by the parties that the technical problem solved by features (7) and (8) is to provide an improved temperature management taking into account the rear part of the passenger compartment.

3.3 The board does not follow the argument of the appellant that it would be obvious for a skilled person faced with the above-mentioned technical problem, to provide, for the rear part of the passenger compartment, a single heat exchanger for both cooling and heating.

The appellant argues that this would be obvious because E12 would prompt the skilled person to consider a single heat exchanger for cooling and heating.

3.3.1 The description of the patent specification explicitly mentions in paragraph [0002] the phenomenon of flash fogging and its relevance for safety. Document E1 is to be regarded as the starting point for the assessment of inventive step in particular because it specifically deals with avoiding this phenomenon. Document E12 is silent about the flash fogging phenomenon and its relevance for safety.

3.3.2 As submitted by the respondent, the state of the art on file consistently discloses HVAC systems having the same heat exchanger arrangement for the front and the rear parts of the passenger compartment. Since the flash fogging problem has already been considered and solved in the HVAC system according to document E1,

namely by providing separate heat exchangers for cooling and heating, a skilled person desiring to improve the system of E1 would have no reason to dispense, of all things, with the feature that allows to avoid flash fogging. Thus, based on an objective assessment of the prior art, the obvious solution to the above-mentioned technical problem would be to provide separate heat exchangers for cooling and heating the rear part of the passenger compartment.

The recognition that separate heat exchangers would not be necessary because flash fogging would not represent a problem for the rear part of the passenger compartment is not one which can be derived from the available prior art and justifies therefore the presence of an inventive step.

3.4 The appellant argues that the skilled person knows that flash fogging does not cause safety problems in the rear part of the passenger compartment. In the absence of any evidence, however, this argument can only be regarded as an unsubstantiated allegation. Furthermore, in the absence of any indications in the prior art in that respect, the assumption that the skilled person would recognize that flash fogging would not cause problems in the rear part of the vehicle compartment and thus would recognize that, for improving the system of E1 as regards the rear part of the passenger compartment, there would be no need for separate heat exchangers for cooling and heating in that part must be regarded as based on hindsight.

From the above it also follows that the choice of a single heat exchanger for cooling and heating cannot

simply be regarded, as argued by the appellant, as an obvious selection among a restricted number of possibilities. Indeed, as explained, the skilled person would in fact exclude the possibility of modifying the system of E1 by providing a single heat exchanger for cooling and heating.

3.5 In its written submissions the appellant further argued lack of inventive step in view of the combination of A1 and E12, A1 representing an alternative to E1 as the starting point. Since A1 discloses a system similar to that of E1, which also differs from the subject-matter of claim 1 by the above-mentioned features 7 and 8 (see point 3.1), and since A1 focuses on the performance of the air conditioner (see par. [0012]) and consistently teaches to provide separate heat exchangers for cooling and heating (see e.g. Figs. 1 to 12), in analogy to the above reasoning in respect of E1 as the starting point, there is no reason for the skilled person to consider modifying the system of A1 by providing a single heat exchanger as disclosed by E12 for cooling and heating the rear part of the passenger compartment. On the contrary, the obvious solution would be to essentially duplicate the system of A1.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

A. Vottner G. Pricolo