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**Datasheet for the decision
of 27 October 2023**

Case Number: T 1684/21 - 3.2.01

Application Number: 09754723.6

Publication Number: 2279883

IPC: B60H1/00, B60H1/12

Language of the proceedings: EN

Title of invention:
AIR CONDITIONER FOR VEHICLE

Patent Proprietor:
Mitsubishi Heavy Industries, Ltd.

Opponent:
MAHLE International GmbH

Headword:

Relevant legal provisions:

EPC Art. 83
RPBA 2020 Art. 13(2)

Keyword:

Sufficiency of disclosure - (no)
Amendment after summons - exceptional circumstances (no)

Decisions cited:

Catchword:



Beschwerdekammern

Boards of Appeal

Chambres de recours

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Case Number: T 1684/21 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 27 October 2023

Appellant: MAHLE International GmbH
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 23 July 2021
rejecting the opposition filed against European
patent No. 2279883 pursuant to Article 101(2)
EPC.**

Composition of the Board:

Chairman G. Pricolo
Members: C. Narcisi
M. Millet

Summary of Facts and Submissions

I. The opposition was rejected and European patent No. 2 279 883 was maintained as granted by the decision of the Opposition Division posted on 23 July 2021. Against this decision an appeal was lodged by the Opponent in due form and in due time pursuant to Article 108 EPC.

II. The following documents are cited in this decision:

EP-A (designating the published patent application of the contested patent);

EP-B (designating the publication of the contested patent).

III. Oral proceedings were held on 27 October 2023. The Appellant (Opponent) 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 and the patent be maintained as granted (main request) or, in the alternative, according to one of auxiliary requests 1 to 3 (filed on 1 April 2022 with the reply to the statement of grounds of appeal), or according to one of auxiliary requests 4 to 7 (filed on 8 August 2023).

IV. Granted claim 1 (main request) reads as follows:

"A vehicle heating ventilation and air conditioning unit (1) that is configured so as to selectively blow out an air flow whose temperature has been regulated by an evaporator (4) and a heater (5) mounted in an air

channel from a DEF blowing channel (17), a face blowing channel (16), and a foot blowing channel (18), which are provided downstream of the evaporator (4) and the heater (5), into a cabin by opening and closing a DEF damper (8), a face damper (7), and a foot damper (9), the vehicle heating ventilation and air conditioning unit comprising:

side demister channels (31) that are provided at both side portions of the DEF blowing channel (17) so as to guide the temperature-regulated air to side window glass, and plate-like baffle ribs (36, 36a, 36b, 36c) that are provided in the vicinity of both end portions of the DEF damper (8) that opens and closes the DEF blowing channel (17) and the side demister channels (31) simultaneously so as to guide the temperature regulated air to the side demister channels (31), the vehicle heating ventilation and air conditioning unit being characterized in that

the baffle ribs (36, 36a, 36b, 36c) are provided at locations of substantially around 50% of the distance relative to the widthwise dimension (L) of the side demister channels (31) from both end portions of the DEF damper (8)."

Claim 1 of auxiliary request 1 differs from claim 1 of the main request in that the wording "side demister channels (31), the vehicle heating ventilation and air conditioning unit being characterized in that" is replaced by "side demister channels (31); wherein", and the wording "from both end portions of the DEF damper (8)" is replaced by "from both end portions of the DEF damper (8) ; and the baffle ribs (36, 36a, 36b, 36c) have a function of guiding the temperature-regulated air flowing in the width direction of the DEF damper (8) to the side demister channels (31) from the gap between both end portions of the DEF damper (8) and the

unit case, when the DEF damper (8) is set to a small degree of opening in a foot mode where the foot damper (9) is opened and the temperature regulated air is blown out from the foot blowing channel (18)".

Claim 1 of auxiliary request 2 differs from claim 1 of auxiliary request 1 in that the wording "and the temperature regulated air is blown out from the foot blowing channel (18)" is replaced by "and the temperature regulated air is blown out from the foot blowing channel (18); and the DEF damper is configured so that the temperature-regulated air corresponding to about 10 to 20% of the total airflow in the foot mood is blown out from a defroster vent (30) of the DEF blowing channel and from the side demister channels (32), to be guided respectively towards a windshield and the side window glass".

Claim 1 of auxiliary request 3 differs from claim 1 of auxiliary request 2 in that the wording "and the DEF damper is configured so" is replaced by "and the DEF damper is configured so that the temperature-regulated air of the airflow corresponding to about 10 to 20% of the total airflow in the foot mode is blown out from a defroster vent (30) of the DEF blowing channel and from the side demister channels (32), to be guided respectively towards a windshield and the side window glass".

Claim 1 of auxiliary requests 4, 5, 6 and 7 differs from claim 1 of the main request, and of auxiliary requests 1, 2 and 3 respectively, merely in that in claim 1 of each of the main request and of auxiliary requests 1 to 3 the wording "simultaneously so as to guide the temperature-regulated air to the side demister channels (31)" is replaced by the wording

"simultaneously so as to guide the temperature-regulated air to the side demister channels (31), and an air mix damper (6) arranged between the evaporator (4) and the heater (5)".

V. The Appellant's (Opponent) arguments may be summarized as follows:

The subject-matter of granted claim 1 of the main request in conjunction with the disclosure of the invention in the patent specification (see published patent specification EP-B) does not disclose the invention in a manner sufficiently clear and complete for the skilled person to be able to carry it out.

Indeed, the feature of claim 1 implying that "an air flow whose temperature has been regulated by an evaporator (4) and a heater (5)" (hereinafter designated as feature (i)) is not supported by the description and the overall disclosure of EP-B, and the skilled person would not know how to implement this feature.

The description of EP-B merely discloses and discusses an embodiment in which the air temperature is not regulated by the evaporator and the heater, but instead by the air-mix damper 6 (see EP-B, paragraph [0032]). According to this embodiment, the position (opening degree) of said air-mix damper 6 is adjusted such that a heated air flow component (which passed through the heater) and a cold airflow component (which passed through the evaporator) are correspondingly mixed, in order to obtain the desired and intended air temperature, thus obtaining a temperature-regulated air flow. No other way of obtaining said temperature-regulated air flow is disclosed in EP-B.

Hence, the technical teaching of feature (i) is clearly and evidently in disagreement with the disclosure of EP-B, as feature (i) clearly and unambiguously requires that said temperature-regulated air flow is obtained by mixing an air flow component whose temperature is obtained by the regulating action of the evaporator, with an air flow component whose temperature is obtained by the regulating action of the heater. However, there is no disclosure in EP-B to the extent that the evaporator and the heater themselves are controlled to regulate the temperature as defined in claim 1.

Furthermore, the aforementioned deficiencies are evidently not deficiencies under Article 84 EPC, as the claim's wording is indisputably clear in that the temperature-regulated air is obtained by the regulation performed by the evaporator and by the heater.

The auxiliary requests 4 to 7 should not be admitted into the appeal proceedings, for they were filed too late, particularly after the Board's communication under Article 15 (1) RPBA 2020 (Rules of Procedure of the Boards of Appeal), no extraordinary circumstances justifying their admittance at the given stage of the proceedings.

VI. The Respondent's (Patentee) arguments may be summarized as follows:

The subject-matter of granted claim 1 in conjunction with the disclosure of the invention in the patent specification is sufficiently clear and complete for the skilled person to be able to put the invention into effect.

In particular, the skilled person would be able to implement feature (i) given that the skilled person readily understands that the temperature of the air flow can be reduced by a thermal exchange between the air flow and the evaporator, and that the temperature of the air flow can be increased by a thermal exchange between the air flow and the heater. Accordingly, the evaporator and the heater are the two main components used to regulate the temperature of the air flow.

Consequently the skilled person readily understands that the temperature of an air flow can be regulated by using these components to obtain an air flow having a desired temperature.

Thus, the main point is that using an evaporator and a heater is a very well-known and widely used technique to regulate air flow in an HVAC (Heating Ventilation and Air conditioning Unit) unit and this is reflected in said feature (i) of claim 1.

It ensues that the term "regulated" in claim 1 is not to be construed in a strict and narrow sense as meaning a precise (feed-back loop involving) control of the temperature in order to obtain a predetermined temperature value, but it is rather to be construed in a broad sense, as implying merely a general technical teaching of using an evaporator and a heater to produce a temperature change or variation.

The Appellant's arguments are artificial and erroneous, as claim 1 does not exclude that an air-mix damper may be used. Quite to the contrary, an air-mix damper is often used in HVAC systems in which the temperature of the air flow is regulated by an evaporator and a

heater, as is the case in the exemplary embodiment of the contested patent (EP-B). Specifically, in this embodiment an air mixer is used, to mix in an appropriate ratio air which has passed through the evaporator with air which has passed through the heater. Therefore an HVAC (Heating Ventilation and Air conditioning Unit) system according to claim 1 can be put into effect by the skilled person.

In addition, it also has to be borne in mind that in principle a claim cannot include all technical details necessary for the proper functioning of a device, but necessarily has to be limited to the most relevant features. This holds all the more for claim 1 of the present invention, since the inventive concept of the contested patent is not in any way related to the air-mix damper 6 (see figure 1).

Auxiliary requests 4 to 7 should be admitted into the appeal proceedings, since in opposition proceedings at the time when the auxiliary requests 1 to 3 were filed, i.e. just the year before major changes occurred (in the subsequent year 2020) concerning the Rules of Procedure of the Boards of Appeal, the Respondent could not in any way predict or be aware of these forthcoming changes.

Further, exceptional circumstances are invoked, given that the Board's preliminary opinion surprisingly stated that the objections filed against claim 1 were considered as relating to Article 83 EPC and not to Article 84 EPC, as considered in the appealed decision.

Hence the Respondent after the Board's communication had to deal with a change in the subject of the discussion, having to respond and react to objections

on the substance relating to the question of sufficiency of the disclosure and not to questions of clarity.

Reasons for the Decision

1. The appeal is admissible.
2. The subject-matter of granted claim 1 (main request) in conjunction with the disclosure of the invention in EP-B does not disclose the invention in a manner sufficiently clear and complete for it to be carried out by the person skilled in the art (Article 83 EPC).

In the Board's view the skilled person would not be able to implement feature (i) ("an air flow whose temperature has been regulated by an evaporator (4) and a heater (5)"), for the following reasons.

It is first noted that said feature (in conjunction with the further features of claim 1) is clear in itself and requires that the evaporator and the heater regulate the temperature of the air flow. This means that both the heater and the evaporator are operated and controlled in such a way that a desired temperature variation occurs.

Further, even if the claim's wording does not exclude that an air-mix damper may be included in the claimed device (HVAC), nevertheless the claim's wording does not require so, as also confirmed by the Respondent's submissions. Hence, the skilled person would face the task of putting into effect an HVAC (according to claim 1) including feature (i) implying that the air flow

temperature is regulated by the evaporator and the heater, not necessarily including an air-mix damper.

This is in agreement with the legal requirement, that an embodiment which is clearly and evidently encompassed by the claimed subject-matter must be sufficiently clearly and completely disclosed for the skilled person to be able to carry it out.

As emphasized by the Appellant, feature (i) stipulates that air flow temperature regulation is achieved inter alia solely by appropriately operating and controlling the evaporator and the heater, this being based on principles and representing a technical teaching totally different from an air flow temperature regulation involving an air-mix damper, as disclosed in paragraph [0032] of EP-B. According to this specific embodiment in EP-B, the air flow temperature is regulated by the air-mix damper's 6 position, which can be selected anywhere between a maximum cooling position and a maximum heating position (see EP-B, paragraph [0032]).

The skilled person, however, would not find in EP-B any indication, guidance or instruction as to how feature (i) is to be implemented when the air flow temperature is regulated only by operating and controlling an evaporator and a heater. The specific embodiment disclosed in EP-B and discussed above does not give the skilled person any suggestions or hints leading to a solution of this technical problem, the air-flow temperature regulation by means of an air-mix damper being based on entirely different principles as already noted hereinbefore.

This deficiency likewise cannot be remedied by referring to the skilled person's common general knowledge, as no evidence for such a common general knowledge was provided and adduced by the Respondent and no prior art document corroborating this assumption was likewise submitted.

Moreover, it is not plausible, as submitted by the Respondent, that in principle air flow temperature regulation could be implemented by manually switching on and off the evaporator and/or the heater. Indeed, in the first place such a solution could not be possibly implemented in state of the art HVAC systems at the priority date of the contested patent, since in such modern vehicles air flow temperature regulation and control is fully automated.

There is also no suggestion and no evidence in the cited prior art or on the basis of (proven) common general knowledge that an automated air flow regulating process could be put into effect, based merely on switching on/off the evaporator and/or the heater, and that it could give satisfactory results in terms of a desired and sufficiently accurate and predictable temperature variation (even though not leading to a precisely predetermined temperature), as well as in terms of technical feasibility, efficiency and effectiveness, let alone that such satisfactory results could be obtained by a purely manually operated system.

Finally, it also cannot be similarly derived from common general knowledge that merely by regulating the cooling degree (or power) of the evaporator and/or the heating degree (or power) of the heater the aforementioned satisfactory results could be obtained.

In summary, the complete absence of any guidance, indication, suggestion or instruction in the disclosure of EP-B concerning the implementation of said feature (i) cannot be compensated by the common general knowledge of the person skilled in the art, since no evidence for such common general knowledge was provided.

For the above reasons it is concluded that the subject-matter of claim 1 in conjunction with the disclosure of EP-B does not disclose the invention in a manner sufficiently clear and complete for the skilled person to be able to carry it out.

3. The same reasons as above apply for auxiliary requests 1 to 3, which all fail to comply with the requirements of Article 83 EPC.
4. The Board did not admit auxiliary requests 4 to 7 into the appeal proceedings, since these requests were filed at a late stage in the proceedings, i.e. after the communication of the Board pursuant to Article 15(1) RPBA 2020 (Rules of Procedure of the Boards of Appeal), and such late filed requests can only be admitted under exceptional circumstances (Article 13(2) RPBA 2020).

The Respondent, however, did not provide valid reasons why such exceptional circumstances would arise in the present case. In effect, the Appellant clearly and explicitly detailed in its statement of grounds of appeal the reasons why it considered that the invention was not sufficiently clearly and completely disclosed in EP-B, these reasons being the same as already submitted during opposition proceedings. In particular, the Appellant clearly and unequivocally specified that its objections were submitted on the grounds of Article

83 EPC and could not be considered as relating to Article 84 EPC, as it was in its opinion erroneously decided by the Opposition Division in the appealed decision.

Therefore, the Respondent could and should have submitted auxiliary requests 4 to 7 at the latest with its reply to the statement of grounds of appeal. No exceptional circumstances can be identified and invoked in the present case, as the Board's communication merely informed the Respondent that the Board shared the Appellant's view, in that the question to be answered was whether the subject-matter of granted claim 1 complied with the requirements of Article 83 EPC and not whether it complied with the requirements of Article 84 EPC. Thus, the Board's communication could not possibly surprise the Respondent, for the Board's preliminary opinion on said specific issues merely reflected the Appellant's view.

As to the changes or amendments concerning the Rules of Procedure of the Boards of Appeal, which allegedly occurred at the time of filing the auxiliary requests, the Board notes that the Respondent's reply to the statement of grounds of appeal was filed on 1 April 2022, which is well after said changes occurred.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The European patent is revoked.

The Registrar:

The Chairman:



A. Voyé

G. Pricolo

Decision electronically authenticated