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**Datasheet for the decision
of 26 October 2018**

Case Number: T 2376/15 - 3.2.01

Application Number: 10425244.0

Publication Number: 2409864

IPC: B60H1/00

Language of the proceedings: EN

Title of invention:
Automotive air-conditioning system

Patent Proprietor:
C.R.F. Società Consortile per Azioni

Opponent:
MAHLE International GmbH

Headword:

Relevant legal provisions:

EPC Art. 123(3)
RPBA Art. 13(1)

Keyword:

Amendments - extension of protection (yes)
Late-filed auxiliary request - admitted (no)

Decisions cited:

T 1018/02, T 1202/07

Catchword:



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Case Number: T 2376/15 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 26 October 2018

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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
12 October 2015 concerning maintenance of the
European Patent No. 2409864 in amended form.**

Composition of the Board:

Chairman G. Pricolo
Members: J. J. de Acha González
O. Loizou

Summary of Facts and Submissions

- I. The appeal of the opponent lies against the decision of the Opposition Division to maintain the above mentioned European patent in amended form.
- II. The Opposition Division held inter alia that the subject-matter of claim 1 as amended during the opposition proceedings met the requirements of Article 123(3) EPC.
- III. Oral proceedings were held on 26 October 2018.

The appellant (opponent) requested that the decision under appeal be set aside and that the patent be revoked.

The respondent (patent proprietor) requested that the appeal be dismissed (main request) or in the alternative, that the patent be maintained in amended form on the basis of the set of claims of the auxiliary request, as filed during the oral proceedings.

- IV. Claim 1 of the patent as maintained by the Opposition Division reads as follows (differences with respect to granted claim 1 in bold or struck through):

"An automotive air-conditioning system **(5)** for a motor vehicle (1) having a passenger compartment, **an engine compartment**, and an engine unit (2) **with an associated engine cooling radiator, both arranged in the engine compartment**;

the **air-conditioning** system (5) comprising a thermal unit (11) provided with a hot section (16) and a cold section (18); and a hydraulic circuit (6), which is designed to be flown by a carrier fluid and comprises a

first portion (13) provided with a first heat exchanger (7) configured to be arranged in the passenger compartment, a second portion (14) provided with a second heat exchanger (9), a third portion or hot portion (20) extending through said hot section (16) and having an inlet (23) and an outlet (24), and a fourth portion or cold portion (21) extending through said cold section (18) and having an inlet (25) and an outlet (26);

the **air-conditioning** system (5) further comprising a valve device (22), ~~characterised in that the valve device (22)~~ **which** comprises a first four-way two-position solenoid valve (V1-V2) associated to said inlets (23, 25) and a second four-way two-position solenoid valve (V3-V4) associated with said outlets (24, 26);

the valve device (22) being designed to connect selectively either the hot portion (20) or the cold portion (21) with the first portion (13) and second portion (14), so as to set selectively the hydraulic circuit (6) in a first configuration, in which the first valve (V1-V2) and the second valve (V3-V4) connect the inlet (25) and, respectively, the outlet (26) of the cold portion (21) with the first portion (13) so that said first heat exchanger (7) is fluidically connected to the cold portion (21), and to connect the inlet (23) and, respectively, the outlet (24) of the hot portion (20) with the second portion (14), so that said second heat exchanger (9) is fluidically connected to the hot portion (20); and **in** a second configuration, in which the first valve (V1-V2) and the second valve (V3-V4) connect the inlet (23) and, respectively, the outlet (24) of the hot portion (20) with the first portion (13) so that said first heat exchanger (7) is fluidically connected to the hot portion (20) and to connect the inlet (25) and,

respectively, the outlet (26) of the cold portion (21) with the second portion (14) so that said second heat exchanger (9) is fluidically connected to the cold portion (21);

the second heat exchanger (9) is the engine cooling radiator;

the second portion (14) comprises first by-pass means (34, 39) of the second heat exchanger (9), which in turn comprise a first by-pass branch (39) arranged in parallel to the intake branch (36) which extends through the second heat exchanger (9), and a valve (34) operable to fluidically isolate the first by-pass branch (39) when the hydraulic circuit (6) is in the first configuration so as to cause the carrier fluid to flow only through the intake branch (36) and the second heat exchanger (9); the valve (34) being also operated to fluidically isolate the intake branch (36) and the second heat exchanger (9), when the hydraulic circuit (6) is in the second configuration so as to cause the carrier fluid to flow only through the first by-pass branch (39)."

Claim 1 of the auxiliary request reads as follows (differences with respect to claim 1 of the auxiliary request in bold or struck through):

"An automotive air-conditioning system (5) for a motor vehicle (1) having a passenger compartment, an engine compartment, and an engine unit (2) with an associated engine cooling radiator, both arranged in the engine compartment; the air-conditioning system (5) comprising a thermal unit (11) provided with a hot section (16) and a cold section (18); and a hydraulic circuit (6), which is designed to be flown by a carrier fluid and comprises a first portion (13) provided with a first heat exchanger (7) configured to be arranged in the

passenger compartment, a second portion (14) provided with a second heat exchanger (9), a third portion or hot portion (20) extending through said hot section (16) and having an inlet (23) and an outlet (24), and a fourth portion or cold portion (21) extending through said cold section (18) and having an inlet (25) and an outlet (26);

the second portion (14) comprises first by-pass means (34, 39) of the second heat exchanger (9), which in turn comprise a first by-pass branch (39) arranged in parallel to an intake branch (36) which extends through the second heat-exchanger (9);

the air-conditioning system (5) further comprising a valve device (22), which comprises a first four-way two-position solenoid valve (V1-V2) associated to said inlets (23, 25) and a second four-way two-position solenoid valve (V3-V4) associated with said outlets (24, 26);

the valve device (22) being designed to connect selectively either the hot portion (20) or the cold portion (21) with the first portion (13) and second portion (14), so as to set selectively the hydraulic circuit (6) in a first configuration, in which the first valve (V1-V2) and the second valve (V3-V4) connect the inlet (25) and, respectively, the outlet (26) of the cold portion (21) with the first portion (13) so that said first heat exchanger (7) is fluidically connected to the cold portion (21), and to connect the inlet (23) and, respectively, the outlet (24) of the hot portion (20) with the second portion (14), so that said second heat exchanger (9) is fluidically connected to the hot portion (20) **through a by-pass valve (34), which is operable to close an inlet of the by-pass branch (39) and cause all the carrier fluid to flow along the intake branch (36) and through the second heat exchanger (9);** and in a second

configuration, in which the first valve (V1-V2) and the second valve (V3-V4) connect the inlet (23) and, respectively, the outlet (24) of the hot portion (20) with the first portion (13) so that said first heat exchanger (7) is fluidically connected to the hot portion (20), and to connect the inlet (25) and, respectively, the outlet (26) of the cold portion (21) with the second portion (14) so that said second heat exchanger (9) is **fluidically** connected to the cold portion (21) **through the by-pass valve (34), which is operable to close the inlet of the intake branch (36) and cause all the carrier fluid to flow along the by-pass branch (3), thereby preventing the carrier fluid to flow through the second heat exchanger (9);** the second heat exchanger (9) is the engine cooling radiator.†

~~the second portion (14) comprises first by-pass means (34, 39) of the second heat exchanger (9), which in turn comprise a first by-pass branch (39) arranged in parallel to the intake branch (36) which extends through the second heat exchanger (9), and a valve (34) operable to fluidically isolate the first by-pass branch (39) when the hydraulic circuit (6) is in the first configuration so as to cause the carrier fluid to flow only through the intake branch (36) and the second heat exchanger (9); the valve (34) being also operated to fluidically isolate the intake branch (36) and the second heat exchanger (9), when the hydraulic circuit (6) is in the second configuration so as to cause the carrier fluid to flow only through the first by-pass branch (39)."~~

V. The appellant's submissions may be summarised as follows:

The patent as maintained in amended form by the Opposition Division extended the protection it conferred (Article 123(3) EPC). In particular, the deletion of the term "fluidically" from claim 1 as granted in the feature "said second heat exchanger (9) is fluidically connected to the cold portion (21)" generalized the kind of connection of the second heat exchanger to the cold portion so that claim 1 as maintained foresaw the possibility that the carrier fluid would no longer flow through the second heat exchanger in the second configuration of the valve device.

The auxiliary request filed during the oral proceedings should not be admitted because it raised new objections. Firstly, a clarity problem was introduced in claim 1 due to a contradiction in its wording (Article 84 EPC). In the second configuration of the valve device the carrier fluid flowed through the second heat exchanger because it was claimed to be fluidically connected to the cold portion. However, the by-pass valve was operable in this configuration to isolate the second heat exchanger thereby preventing the carrier fluid to flow through the second heat exchanger. This was contradictory. Fluidically connected did not mean fluidically connectable. Further, the clarity issue notwithstanding, according to claim 1 of the auxiliary request the second heat exchanger could be fluidically isolated or connected to the cold portion of the hydraulic circuit depending on the position of the by-pass valve in the second configuration of the valve device. This represented an unallowable extension pursuant to Article 123(2) EPC

because, according to the originally filed application, in that configuration the carrier fluid was prevented from traversing the second heat exchanger, i.e. it was only fluidically isolated from the cold portion.

VI. The counter arguments of the respondent may be summarised as follows:

The deletion of the term "fluidically" did not result in an extension of protection conferred by the patent. Clearly for the skilled person the term "fluidically connected" in claim 1 as granted indicated a connection between the cold portion and the second heat exchanger such that a carrier fluid may flow through the second heat exchanger according to circumstances, and not to a connection such that carrier fluid actually flowed through the heat exchanger. This was analogous to a dishwashing machine connected to the water mains through a tube and a valve, where water selectively flowed depending on the position of the valve. This fluid connection of claim 1 actually referred to a structural feature of the system and not to its function, which was ultimately defined by the operation of the by-pass valve.

On the other hand, if it were to be considered that the term indeed meant that fluid actually flowed through the second heat exchanger in the second configuration of the valve device, then the term "fluidically connected" would be inconsistent with the description and drawings, where the intended connection was disclosed.

What was intended to be claimed in claim 1 as granted was actually what was claimed in claim 1 as maintained by the Opposition Division. The amendment made to claim 1 was to be regarded as the replacement of an inaccurate technical statement (because the wording of

granted claim 1 was inconsistent with the disclosure of the patent) by the accurate statement, thereby resulting in an amended claim 1 having the same meaning as the correct interpretation of the uncorrected claim 1 as granted in the light of the description and drawings of the specification. Such a replacement was considered allowable by established case law.

The auxiliary request filed during the oral proceedings was intended to overcome the Article 123(3) EPC objection by reinstating literally the problematic deleted feature. Further, the claim was clear and it specified, as described originally and in the description of the patent specification, how the fluid connection of the second heat exchanger to the cold portion worked in the different configurations of the by-pass valve.

Reasons for the Decision

1. Main request - Extension of protection
 - 1.1 Pursuant to Article 123(3) EPC the European patent may not be amended in such a way as to extend the protection it confers.
 - 1.2 Granted claim 1 specifies that the second heat exchanger is fluidically connected to the cold portion when the valve device sets the hydraulic circuit in the second configuration.

According to claim 1 of the main request, in the second configuration the second heat exchanger is fluidically

isolated from the carrier fluid, so as to cause the carrier fluid to flow only through the first by-pass branch.

Therefore, according to claim 1 of the main request the second heat exchanger is not anymore fluidically connected to the cold portion in the second configuration because the carrier fluid is not flowing through the second heat exchanger but only through the by-pass branch.

As a result, the patent has been amended in such a way as to extend the protection it conferred. In fact, the extent of protection has been shifted from a fluid connection to a fluid isolation with the cold portion in the second configuration of the valve device.

- 1.3 The respondent considered that the amendment made to claim 1 as granted during the opposition proceedings merely amounted to the replacement of an inaccurate technical statement that was inconsistent with the disclosure of the patent (see paragraph [0041] of the description of the patent specification) by an accurate one resulting in a subject-matter having the same meaning as the correct interpretation of the uncorrected claim 1 as granted when read in the light of the description and figures. This replacement should be considered to be allowable in view of established case law.

However, the statement of claim 1 as granted, according to which "the second heat exchanger is fluidically connected to the cold portion" in the second configuration does not represent a statement that a skilled person would regard as technically inaccurate. Indeed, it is technically feasible to fluidically

connect the second heat exchanger to branch 33 in any of the operating configurations of the valve device 22 depending on the control of the valve 34 (see figure 1 of the patent). This cannot be regarded as devoid of technical sense, as it cannot be excluded that also in the second configuration, in which cold carrier fluid flows within the second portion (14) of the hydraulic circuit (6), the carrier fluid is allowed to flow through the second heat exchanger. In fact, the respondent has failed to show that, apart from not being disclosed in the application as filed, such mode of operation would be discarded by the skilled person as clearly technically incorrect or inaccurate. The wording of claim 1 as granted is thus clear, its subject-matter makes technical sense and is devoid of any technical incorrectness or inaccuracies, so that referring to the description for interpretation of any term is not necessary (see in particular T 1018/02 reasons point 3.8 and T 1202/07 reasons point 2.4 to 2.12; both cited by the respondent in his reply).

- 1.4 The respondent further considered that when reading claim 1 the skilled person differentiated between structural features and functional features. In this sense it would be clear that the wording "the second heat exchanger fluidically connected to the cold portion" referred to a structural connection which allowed the fluid carrier to flow or not flow through the second heat exchanger, depending on the position of the by-pass valve 34 (see figures 1 and 2). This was analogous to a dishwashing machine being connected to the water mains through a tube and a valve. The skilled person understood that the machine was fluidically connected to the mains although not necessarily fluid was flowing into the washing machine, this being dependent on the position of the valve.

The Board does not share this view. The wording in question refers to an operation mode of the air-conditioning system, namely to the second configuration of the hydraulic circuit as set by the valve device 22. This second configuration corresponds to a working condition of the system - winter mode - and thus does not only refer to the structural connection of its parts but also to how it functions in that specific configuration. According to granted claim 1 in the second configuration the second heat exchanger is fluidically connected to the cold portion and thus the carrier fluid is flowing through the heat exchanger. The same wording is used for the first configuration in which the carrier fluid flows through the first heat exchanger.

The respondent actually read the wording of claim 1 as meaning that the heat exchanger is fluidically connectable (and not connected) to the cold portion in the second configuration. This is however not what is recited by the claim.

1.5 As a consequence, deleting the term "fluidically" in the wording "the second heat exchanger fluidically connected to the cold portion" from claim 1 as granted and further adding in claim 1 of the main request "fluidically isolate the second heat exchanger" for the second configuration of the valve device represents a shifting of the extent of protection conferred by the patent as granted which contravenes the requirements of Article 123(3) EPC.

2. Admission of the auxiliary request

2.1 Pursuant to Article 13(1) of the Rules of Procedure of the Boards of Appeal (RPBA, OJ EPO 2007, 536) any

amendment to a party's case after it has filed its grounds of appeal or reply may be admitted and considered at the Board's discretion. The discretion shall be exercised in view of inter alia the complexity of the new subject-matter submitted, the current state of the proceedings and the need for procedural economy.

- 2.2 The auxiliary request was filed by the respondent during the oral proceedings before the Board. The request was aimed to overcome the above mentioned Article 123(3) EPC objection.
- 2.3 However, claim 1 foresees in the second configuration that the second heat exchanger is fluidically connected to the cold portion but at the same time fluidically isolated when the by-pass valve is operated accordingly. This contradiction - as put forward by the appellant - raises an issue of clarity (Article 84 EPC). Further, the contradiction notwithstanding, issues regarding added subject-matter (Article 123(2) EPC) would have to be discussed since in the second configuration of the valve device 22, the carrier fluid may or may not flow through the second heat exchanger. Finally, it is not immediately apparent that by implying that the second heat exchanger is fluidically isolated in the second configuration, claim 1 would solve the above mentioned problem of extension of scope of protection (Article 123(3) EPC, see point 1 above).

This amendment thus is not clearly allowable (in the sense of clearly overcoming the above-mentioned problematic under Article 123(3) EPC) and gives rise to new issues under Article 84 and 123(2) EPC that would need to be discussed during the oral proceedings.

Under this circumstances the Board exercised his

discretion not to admit the auxiliary request into the appeal proceedings.

Order

For these reasons it is decided that:

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

The Registrar:

The Chairman:



A. Vottner

G. Pricolo

Decision electronically authenticated