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**Datasheet for the decision  
of 2 June 2023**

**Case Number:** T 0399/20 - 3.2.08

**Application Number:** 13177534.8

**Publication Number:** 2690303

**IPC:** F16D55/02

**Language of the proceedings:** EN

**Title of invention:**

A carrier and mount

**Patent Proprietors:**

Meritor Heavy Vehicle Braking Systems (UK) Limited  
Scania CV AB

**Opponent:**

Knorr-Bremse  
Systeme für Nutzfahrzeuge GmbH

**Relevant legal provisions:**

EPC Art. 56  
EPC R. 81(3)

**Keyword:**

Inventive step - (no)  
Reformatio in Peius

**Decisions cited:**

G 0009/92



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Case Number: T 0399/20 - 3.2.08

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.08**  
**of 2 June 2023**

**Appellant:** Knorr-Bremse  
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**Respondent:** Scania CV AB  
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**Decision under appeal:** **Interlocutory decision of the Opposition  
Division of the European Patent Office posted on  
18 December 2019 concerning maintenance of the  
European Patent No. 2690303 in amended form.**

**Composition of the Board:**

**Chairwoman**            P. Acton  
**Members:**             M. Foulger  
                              L. Basterreix

## Summary of Facts and Submissions

- I. With the decision posted on 18 December 2019, the opposition division decided that the patent and the invention to which it related according to the second auxiliary request met the requirements of the EPC.
- II. The opponent filed an appeal against this decision.
- III. Oral proceedings were held before the Board on 2 June 2023. As announced with the letter dated 19 April 2023, the respondents (patent proprietors) did not attend the oral proceedings. In accordance with Rule 115(2) EPC and Article 15(3) RPBA 2020 the proceedings were continued in their absence and they were treated as relying on their written submissions.
- IV. The appellant (opponent) requested that the decision under appeal be set aside and that the patent be revoked.
- V. The respondents requested that the appeal be dismissed, or in the alternative, that the patent be maintained according to one of auxiliary requests 1 - 5 filed with the reply to the appeal on 16 September 2020.
- VI. The independent product claims read as follows:

Main request (as found allowable by the opposition division):

"A carrier (12f) and mount (24f) assembly for a heavy vehicle disc brake, the assembly comprising:  
a carrier (12f) having a first location formation (32f) formed therein,

a mount (24f) having a second location formation (30f) formed therein, wherein the second location formation (30f) is aligned with the first location formation (32f), and wherein the carrier (12f) is mounted to the mount (24f) via two or more fasteners that extend in a direction substantially parallel to a tangential direction (T) of insertion or removal of a friction element into or from the carrier (12f); and a locator (38f) positioned in the first (32f) and second (30f) location formations to enable the carrier (12f) and mount (30f) to be assembled in the correct position, and wherein the locator (38f) is a bush, and the bush extends at least partially through the first (32f) and second (30f) formations, **characterised in that** the locator (38f) is an interference fit to the first (32f) and second (30f) location formations."

Auxiliary request 1

The characterising part has been changed (additions underlined, deletions struck through) as follows:  
"the locator (38f) is at least a close ~~interference~~ fit to the first (32f) and second (30f) location formations; and wherein the bush is a split bush."

Auxiliary request 2

The following feature is added to claim 1 of the main request:  
"wherein the bush is a split bush."

Auxiliary request 3

The following feature is added to the independent claims of auxiliary request 1:  
"wherein an end of the bush received in the mount (24f)

has a chamfered outer edge (70f)."

Auxiliary request 4

The extra features of auxiliary requests 2 and 3 are added to the independent claims of auxiliary request 1.

Auxiliary request 5

The following features replace the characterising part of the independent claim 1 as granted:

"the carrier comprises two holes (84f,86f) arranged such that one hole is positioned on either side of a plane defined by an axis extending substantially parallel to a direction of insertion or removal of a friction element into or from the carrier (12f) and an axis of rotation of a rotor of a disc brake, and wherein the mount (24f) comprises two holes (76f,78f) positioned to be substantially coaxial with the two holes of the carrier (12f), and wherein one of the two or more fasteners extends through each of the holes for mounting the carrier (12f) to the mount (24f); the first location formation (32f) is integrally formed with one of the holes (74f) in the carrier (12f) and the second location formation is integrally formed with one of the holes (72f) in the mount (24f); further comprising a further bush (68f) positioned to extend at least partially through the other of the two holes (72f) formed in the carrier (12f) and mount (24f) and characterised in that the locator (38f) is at least a close fit to the first (32f) and second (30f) location formations and in that the further bush (68f) is a loose fit to the bush (72f) in the mount (24f)."

VII. Documents

The following document is relevant for this decision:

E1: US 2008/0135352 A1

VIII. The appellant argued essentially the following:

a) Main request - inventive step

The subject-matter of claim 1 lacked an inventive step over E1 as the closest prior art.

b) Auxiliary requests 1, 3, 4 and 5 - *Reformatio in peius*

In the claims as found allowable by the opposition division, it was specified that the locator was at least an interference fit to the first and second location formations. Auxiliary requests 1, 3, 4 and 5 have changed this to a "close fit". A close fit, as defined by the patent at p. 3, l. 7, was broader than an interference fit because it included the possibility of being a transition fit. Thus the amended claims included embodiments which were broader than those found allowable by the opposition division and, hence, offended against the prohibition of *reformatio in peius*. These requests were therefore not admissible.

b) Auxiliary request 2 - inventive step

The subject-matter of claim 1 did not involve an inventive step because a split bush was a well known connection means.



IX. The respondents argued essentially the following:

a) Main request - inventive step

E1 did not disclose the characterising feature of claim 1 whereby the locator is an interference fit to the first and second location formations. Paragraph [0014], final sentence, taught that an individual joint should not be over-constrained to prevent binding. This led the skilled person away from the claimed invention and, hence, it was not obvious for the skilled person to design the locator with an interference fit.

b) Auxiliary requests 1, 3, 4 and 5 - *Reformatio in peius*

The respondents stated in the reply to the appeal with regard to auxiliary request 1, paragraph 11.1, that "[t]he Respondents recognise that under *Reformatio in Peius* principles this auxiliary request is admissible in the unlikely event that the Appellant's attacks at 7 or 7.1 are successful."

The respondents also proposed filing new requests replacing "close fit" with "interference fit" during the oral proceedings.

b) Auxiliary request 2 - inventive step

There was no suggestion that a split bush was used in E1, in particular references to pins and dowels in E1 did not suggest a particular type of bush that was resiliently compressible. This had the advantage of ensuring accurate alignment due to the interference fit but nevertheless enabled assembly to be more easily achieved.

The subject-matter of claim 1 therefore involved an inventive step.

## **Reasons for the Decision**

### 1. Main request

It is common ground that E1 discloses a carrier and mount assembly comprising the features of the preamble of claim 1. E1 discloses a "close tolerance fit" between the shear sleeve 45 and its receiving hole (see paragraph [0028]).

The subject-matter of claim 1 therefore differs from this known assembly in that the locator is an interference fit to the first and second location formations.

Under the term "close fit" the Board understands a fit that may either be a transition fit or an interference fit (see also patent, paragraph [0011]). Therefore in order to put the teaching of E1 into practice the skilled person would have to select either one of these fits.

The Board considers that the selection of dimensions is part of the daily routine of the skilled person and consequently does not involve an inventive step (see Case Law of the Boards of Appeal, 10th edition, 2022, I.A.D.9.17). Moreover, in the current case there are merely two alternatives - either a transition fit or an interference fit - from which the skilled person would need to choose.

Hence, the subject-matter of claim 1 does not involve an inventive step.

2. Auxiliary requests 1, 3, 4 and 5

In all of these requests the feature whereby "the locator (38f) is an interference fit to the first (32f) and second (30f) location formations" has been changed to specify a close fit. A close fit was specified in granted claim 1 and was changed in opposition proceedings to specify an interference fit.

The term "close fit" is more general than the term "interference fit" because it also encompasses transition fits. Thus, the claims of auxiliary requests 1, 3, 4 and 5 cover embodiments which were not covered by the claims of the request found allowable by the opposition division. This contravenes the interdiction of *reformatio in peius* established in G 9/92 and therefore these auxiliary requests are not appropriate in the sense of Rule 81(3) EPC and, hence, not admissible.

3. Auxiliary request 2

The subject-matter of claim 1 of this request is further limited over that of the main request in that the locator is a split bush.

The respondents argued that there was no suggestion in E1 to use a split bush.

From E1 it cannot be seen what type of locator is used. The problem to be solved is therefore to select an appropriate locator.

The Board considers that a split bush is a well known engineering component that would be an obvious alternative for the skilled person seeking to solve the above problem even without an indication in E1. The application of such well known measures which are usual in the art cannot justify the presence of an inventive step.

The subject-matter of claim 1 does not involve an inventive step.

## **Order**

### **For these reasons it is decided that:**

The impugned decision is set aside and the patent is revoked.

The Registrar:

The Chairwoman:



T. Buschek

P. Acton

Decision electronically authenticated