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**Datasheet for the decision  
of 15 June 2023**

**Case Number:** T 2004/20 - 3.3.02

**Application Number:** 12781239.4

**Publication Number:** 2771441

**IPC:** C10M133/44

**Language of the proceedings:** EN

**Title of invention:**

LUBRICANTS WITH IMPROVED SEAL COMPATIBILITY

**Patent Proprietor:**

The Lubrizol Corporation

**Opponent:**

Afton Chemical Corporation

**Relevant legal provisions:**

EPC Art. 123(2)

**Keyword:**

Amendments

**Decisions cited:**

T 1442/19, T 0347/17, T 0050/97, T 0615/95



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Case Number: T 2004/20 - 3.3.02

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.02**  
**of 15 June 2023**

**Respondent:** The Lubrizol Corporation  
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**Representative:** D Young & Co LLP  
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**Appellant:** Afton Chemical Corporation  
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**Representative:** J A Kemp LLP  
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**Decision under appeal:** **Interlocutory decision of the Opposition  
Division of the European Patent Office posted on  
9 October 2020 concerning maintenance of the  
European Patent No. 2771441 in amended form.**

**Composition of the Board:**

**Chairman** M. O. Müller  
**Members:** A. Lenzen  
R. Romandini

## Summary of Facts and Submissions

I. This decision concerns the appeals filed by the opponent (appellant) and the patent proprietor against the opposition division's decision (henceforth: decision under appeal) according to which European patent No. 2 771 441 (patent) in amended form meets the requirements of the EPC.

Since the patent proprietor withdrew its appeal at the end of the oral proceedings before the decision was announced, it will be referred to as "respondent" below.

II. The following documents, cited during the opposition proceedings, are relevant to the present decision:

D14 Rudnick, L. R., "Lubricant Additives - Chemistry and Applications", 2nd edn., CRC Press, 2009, pages 18 to 21, 41, 213, 216 and 621 to 624

III. In its decision, the opposition division held that auxiliary request 2 (i.e. the respondent's main request on appeal) met the requirements of the EPC. With regard to this request, the opposition division held in particular that formula (I) of claim 1 was indicated as the most preferred embodiment of the invention in the application as filed. Therefore only one selection, namely that of the sulfurized olefin containing at least 20% by weight sulfur, was necessary to arrive at the subject-matter of claim 1. It followed that the claimed subject-matter of auxiliary request 2 did not extend beyond the content of the application as filed, in accordance with Article 123(2) EPC.

- IV. With the statement of grounds of appeal, the respondent filed, *inter alia*, the set of claims of auxiliary request 28.
- V. In preparation for the oral proceedings, which were held at the request of the parties, the board issued a communication pursuant to Article 15(1) RPBA 2020.
- VI. With a letter dated 21 April 2023, the respondent filed, *inter alia*, the sets of claims of auxiliary requests 29 to 31.
- VII. During the oral proceedings, held on 15 June 2023 on the premises of the European Patent Office, the board decided to refuse the respondent's request under Rule 139 EPC for correction of the term "2-ethyl-hexylamine" in paragraph [0064] of the patent. Before the decision was announced, the respondent withdrew its appeal. At the end of the oral proceedings, the chair announced the order of the present decision.
- VIII. The parties' requests relevant to the present decision which were maintained at the end of the oral proceedings were as follows:

The appellant requested that the decision under appeal be set aside and the patent be revoked in its entirety.

The respondent requested that:

- the opponent's appeal be dismissed, implying that the patent be maintained in the amended form as held allowable by the opposition division (main request)

- the decision under appeal be set aside and the patent be maintained in amended form based on one of the following sets of claims:
  - auxiliary request 1, filed as auxiliary request 28 with the statement of grounds of appeal
  - auxiliary request 2, filed as auxiliary request 29 with the letter dated 21 April 2023
  - auxiliary request 3, filed as auxiliary request 30 with the letter dated 21 April 2023
  - auxiliary request 4, filed as auxiliary request 31 with the letter dated 21 April 2023

IX. Summaries of the respondent's arguments on the allowability of the main request and of auxiliary requests 1 to 4 are contained in the reasons for the decision.

X. The appellant's arguments on the allowability of the main request and auxiliary requests 1 to 4 can be summarised as follows:

The sulfurized olefin containing at least 20% by weight sulfur was mentioned in a list of eight seemingly unrelated embodiments in paragraph [0061] of the application as filed. The application as filed also disclosed that the substituted triazole could comprise a compound of formula (I), formula (II) or a combination thereof. Thus, in order to arrive at the subject-matter of claim 1 of the main request and auxiliary requests 1 to 4, at least two selections had to be made, namely (i) that the lubricating composition comprised a sulfurized olefin containing at least 20% by weight sulfur, and (ii) that the substituted

triazole comprised a compound of formula (I) or even narrower versions thereof.

However, the application as filed contained no clear pointer to the selection of the sulfurized olefin containing at least 20% by weight sulfur, and, consequently, no pointer to the combination of selections (i) and (ii) either. In particular, paragraph [0003] of the application as filed did not provide a pointer to sulfurized olefins, let alone a sulfurized olefin containing at least 20% by weight sulfur. Paragraph [0003] was part of the background section. It did not refer to a sulfurized olefin containing at least 20% by weight sulfur, and even mentioned other additives apart from the sulfurized olefin. The respondent's allegation that, according to common general knowledge, industrial gear lubricating compositions always included a sulfurized olefin was wrong. It was unclear from the application as filed whether any of the examples contained a sulfurized olefin, let alone a sulfurized olefin containing at least 20% by weight sulfur. Hence the examples did not provide a pointer to the combination of selections (i) and (ii) either.

Therefore the subject-matter of claim 1 of the main request and of auxiliary requests 1 to 4 extended beyond the content of the application as filed, contrary to Article 123(2) EPC.

## Reasons for the Decision

Main request (patent in the amended form as held allowable by the opposition division) - Amendments (Article 123(2) EPC)

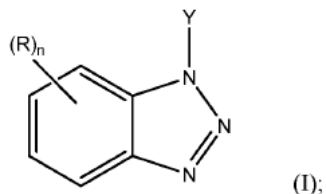
1. In very general terms, claim 1 of the main request (its wording is reproduced further below) relates to the use of a substituted triazole in a lubricating composition as a seal protectant.

The set of claims as filed does not contain a corresponding use claim. For this reason the board, in its communication pursuant to Article 15(1) RPBA 2020, for assessing the requirements of Article 123(2) EPC, started from paragraph [0012] of the application as filed, which reflects such use (*"The invention provides for the use of the described substituted triazoles in lubricating compositions as a seal protectant ..."*). At the oral proceedings before the board, the respondent also argued starting from paragraph [0012] of the application as filed.

Compared with the use formulated in paragraph [0012] of the application as filed, the use set out in claim 1 of the main request differs in several respects. In the following wording of claim 1, the amendments the combination of which ultimately goes beyond the content of the application as filed and which are discussed below are highlighted in bold:

*"Use of a substituted triazole in a lubricating composition **comprising a sulfurized olefin containing at least 20% by weight sulfur** as seal protectant, wherein the substituted triazole includes at least one hydrocarbyl group linked to*

one of the nitrogen atoms in the triazole ring and comprises a compound having the formula:



**where:**

*n is an integer from 0 to 4;*

*-R is a hydrocarbyl group;*

*-Y is  $-(R^2)_m-NR^3R^3$  where m is 0 or 1,*

*-R<sup>2</sup>- is a hydrocarbylene group, and*

*each -R<sup>3</sup> is independently hydrogen or a*

*hydrocarbyl group, so long as the sum of*

*carbon atoms in the -R<sup>2</sup> group and both -R<sup>3</sup>*

*groups is from 7 to 40 combined,*

*wherein a hydrocarbyl group optionally contains no more than two non-hydrocarbyl substituents present for every ten carbon atoms in the hydrocarbyl group."*

2. Thus, compared with the use formulated in paragraph [0012] of the application as filed, claim 1 of the main request further specifies in particular that:

- (i) the lubricating composition comprises a sulfurized olefin containing at least 20% by weight sulfur
- (ii) the substituted triazole comprises a compound of formula (I).



2.1 Re (i)

The only place in the application as filed where a sulfurized olefin containing at least 20% by weight sulfur is disclosed as a component of the lubricating composition of the invention is in paragraph [0061]. This paragraph reads as follows (the emphasis and the numbering from (1) to (8) have been added by the board):

*"The invention further provides for all of the compositions, methods, and uses described herein, (1) where the specified lubricant includes a demulsifier, (2) where the specified lubricant includes a combination of a demulsifier and a sulfurized olefin, (3) where the specified lubricant includes a highly sulfurized olefin such as a sulfurized olefin containing at least 20% by weight sulfur, (4) where the specified lubricant is essentially free or to even completely free of non-highly sulfurized olefins such as a sulfurized olefin containing less than 20% by weight sulfur, (5) where the specified lubricant includes a combination of a substituted triazole and a substituted thiadiazole, (6) where the specified lubricant is essentially free of or even completely free of metal dialkyl dithiophosphates, (7) where the specified lubricant is essentially free of or even completely free of overbased metal-containing detergents, (8) where the specified lubricant is essentially free of or even completely free of zinc, or any combination thereof."*

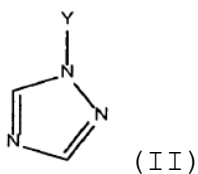
Thus paragraph [0061] of the application as filed concerns a list of eight independent embodiments which can be combined arbitrarily with each other (see "or

*any combination thereof*" in the last line of the quotation above). In order to get to the subject-matter of claim 1 of the main request, exactly one of a total of eight embodiments must be selected.

In writing, the respondent argued that in fact no selection from paragraph [0061] of the application as filed was required. The reason for this was that the limitation to the sulfurized olefin containing at least 20% by weight sulfur was the result of the deletion of seven of the eight embodiments and this was only a restriction of scope but not the singling-out of an embodiment. This is not convincing. The deletion of n-1 members from a list of n members is equivalent to the selection of the remaining member of that list. Both lead to a particular embodiment of the list being singled out (i.e. the sulfurized olefin containing at least 20% by weight sulfur in this case). Such a deletion/selection may be allowable e.g. if it is the only amendment made, in which case it would have to be considered as a 'single selection'. In combination with a further selection, however, allowability depends on whether the application as filed contains a pointer to the combination that is ultimately claimed.

2.2 Re (ii)

The application as filed (see: paragraphs [0008] and [0034]; claims 6 and 17) discloses that the substituted triazole of the invention may comprise a benzotriazole of formula (I) as recited in claim 1 above, a triazole of the following formula (II)



or a combination thereof. As is apparent from their formulae, the two classes of triazoles differ fundamentally in the arrangement of the nitrogen atoms (with regard to the five-membered ring, they are 1,2,3-triazoles and 1,2,4-triazoles, respectively). As a consequence, one formula does not encompass the other and they are mutually exclusive alternatives, i.e. distinct embodiments of the invention. Thus, even if formula (I) were to be disclosed as preferred to formula (II) in the application as filed, a selection of formula (I) from these two different classes of triazoles is nevertheless necessary to get to the subject-matter of claim 1 of the main request, contrary to the view taken in the decision under appeal.

The fact that formula (I) in claim 1 of the main request does not refer to a specific chemical compound but defines a class of compounds in general terms by the residues R and Y does not render a selection superfluous, contrary to the respondent's corresponding argument submitted in writing. In particular, the decisions (T 615/95 and T 50/97) cited by the respondent in support of its argument are not relevant to the present case, as they concern the restriction of meanings for a number of residues within a generic chemical formula, but not the selection of a generic chemical formula from a number of generic but different chemical formulae.

The necessity of choosing formula (I) is not taken away by the fact that claim 8 of the application as filed

explicitly refers only to formula (I) either. A similar situation is found in claim 9 of the application as filed, which explicitly refers only to formula (II), so a choice between claims 8 and 9 is necessary (see T 1442/19, point 2.4.1 of the Reasons).

3. It follows from the above that the subject-matter of claim 1 of the main request is the result of a double selection from the application as filed. According to established case law (e.g. T 347/17, points 4 and 8 to 9 of the Reasons) such a double selection results in subject-matter extending beyond the content of the application as filed, contrary to the requirements of Article 123(2) EPC, unless there is a pointer to the combination of selections made.
4. The respondent essentially took the view that the application as filed, together with the common general knowledge, provided pointers for both selections (i) and (ii) above and that, consequently, the subject-matter of claim 1 of the main request met the requirements of Article 123(2) EPC. The respondent's arguments on selection (i) in this respect are assessed in turn below.
5. As regards pointers to selection (i), the respondent referred to D14 as well as to the example section and the following paragraphs of the application as filed: [0003], [0040] to [0060] and [0061].
  - 5.1 D14 is a textbook which is dedicated to additives of lubricating compositions and discloses that sulfurized olefins are extreme-pressure additives used in industrial gear oils (table 24.5 on pages 623 and 624).

In the example section of the application as filed, different lubricating compositions are tested to evaluate their seal compatibility. It is stated that the compositions tested contain one of two additive packages A or B and that these additive packages comprise antiwear additives (both packages A and B) and extreme-pressure additives (package A only).

Paragraph [0003] belongs to the "*Background of the Invention*" section of the application as filed. According to this section, the aim of the invention is to provide lubricating compositions that protect seals from attack and degradation. Paragraph [0003] reads as follows (emphasis added):

*"Seals, particularly those made using NBR, break down over time under even normal operating conditions. High temperatures in particular can be very detrimental to some seals. In other cases seals can sometimes be susceptible to attack by chemical additive components of some lubricating compositions, including those used frequently in industrial applications, including **some extreme-pressure agents like sulfurized olefins, rust inhibitors like aminic compounds, antiwear agents like phosphates, phosphites, phosphate esters, and phosphate amine salts.** In some cases even the base oil itself can attack seal materials including NBR."*

Paragraphs [0040] to [0060] of the application as filed set out additional additives of the lubricating compositions of the invention.

Paragraph [0061] has already been quoted above.

5.2 According to the respondent, paragraph [0003] of the application as filed acknowledged that industrial lubricating compositions had to include an extreme-pressure additive like a sulfurized olefin. D14 confirmed that this was common general knowledge as it disclosed sulfurized olefins as extreme-pressure additives for industrial gear lubricating compositions in table 24.5. The sulfurized olefins in paragraph [0061] were the only extreme-pressure additives mentioned in the application as filed. This was a pointer to the inclusion of such an additive in the lubricating compositions of the invention.

This conclusion was corroborated by the fact that the application as filed set out additional additives in paragraphs [0040] to [0060] but without providing any details about which specific extreme-pressure additives could be used. The examples of the application as filed were also fully in line with this conclusion because 1. sulfurized olefins were typically referred to as extreme-pressure additives but were sometimes also referred to as antiwear additives, and 2. all the examples contained antiwear and/or extreme-pressure additives. That the examples of the application as filed did in fact comprise a sulfurized olefin containing at least 20% by weight sulfur was confirmed by the respondent in its reply to the notice of opposition.

5.3 The board does not find these arguments convincing, even assuming in the respondent's favour that the disclosures in paragraph [0003] of the application as filed and D14, specifically relating to industrial lubricating compositions, are also applicable to the lubricating compositions recited in claim 1 of the main request, which are not limited to industrial uses.

5.3.1 Paragraph [0003] is contained in the background section of the application as filed. Such sections cannot generally be regarded as readily relevant to the invention of the application as filed. It may be true that, as argued by the respondent, the background section alludes to the problem to be solved by the invention (protection of seals) and that sulfurized olefins are mentioned in this context as being harmful to seals. However, it is also true that not only extreme-pressure additives, like sulfurized olefins, but also other factors, such as in particular also other classes of additives, are disclosed as harmful to seals. Therefore paragraph [0003] could at most be understood as a pointer to none of the additives described in this paragraph as harmful to seals being contained in the lubricating compositions of the invention, but in no case as a pointer to precisely one of the additives mentioned as harmful being contained. In the board's view, this is already enough to conclude that paragraph [0003] of the application as filed does not provide a pointer to sulfurized olefins, let alone to sulfurized olefins containing at least 20% by weight sulfur as stipulated in claim 1.

5.3.2 Furthermore, the wording of paragraph [0003] of the application as filed ("*used **frequently** in [...] applications, **including some** extreme-pressure agents like sulfurized olefins*") can be interpreted as meaning that some lubricating compositions contain extreme-pressure additives such as sulfurized olefins. However, contrary to the respondent's argument, this wording does not suggest that lubricating compositions must necessarily contain extreme-pressure additives, let alone sulfurized olefins or even sulfurized olefins containing at least 20% by weight sulfur. Similarly,

D14 does not disclose the need to include an extreme-pressure additive in lubricating compositions, nor - if this were indeed the case - that the extreme-pressure additive must be a sulfurized olefin, let alone a sulfurized olefin containing at least 20% by weight sulfur. This is because D14 discloses not only sulfurized olefins but also other classes of chemical compounds, such as for example sulfurized esters or diaryl disulfides, as extreme-pressure additives. This conclusion is not contradicted by paragraphs [0040] to [0060] of the application as filed, on which the respondent also relied in support of its argument. On the contrary, it is rather confirmed by the fact that extreme-pressure additives are clearly described in paragraph [0040] as being only optional.

Since the requirement for the respondent's argument, namely that lubricating compositions must contain a sulfurized olefin, is already not met, the argument is not convincing either. Neither paragraph [0003] of the application as filed nor D14 alone nor the two together can serve as an indication that the lubricating compositions of the invention comprise a sulfurized olefin, let alone a sulfurized olefin containing at least 20% by weight sulfur as referred to in paragraph [0061] of the application as filed.

5.3.3 Finally, in so far as the respondent relied on the example section of the application as filed, the following must be noted. The example section discloses that the compositions tested comprise antiwear additives and/or extreme-pressure additives, but does not specify their identity. The fact that sulfurized olefins are antiwear/extreme-pressure additives does not allow the conclusion that the example section implicitly refers to such olefins when mentioning these



additives, because there are other antiwear/extreme-pressure additives besides sulfurized olefins (D14, table 24.5). Therefore the example section does not provide a pointer either to sulfurized olefins, let alone to sulfurized olefins containing at least 20% by weight sulfur. The fact that the respondent confirmed the presence of sulfurized olefins containing at least 20% by weight sulfur in the compositions in a written submission before the opposition division is irrelevant as this statement is neither part of the application as filed nor common general knowledge.

6. It follows from the above that neither the application as filed alone nor taken together with the common general knowledge (D14) provides a pointer for the lubricating compositions of the invention comprising a sulfurized olefin, let alone a sulfurized olefin containing at least 20% by weight sulfur. Consequently, there cannot be a pointer for the combination of the sulfurized olefin containing at least 20% by weight sulfur and the substituted triazole of formula (I) as recited in claim 1 of the main request either. In the board's view, this alone is sufficient to conclude that the subject-matter of claim 1 of the main request extends beyond the content of the application as filed, contrary to Article 123(2) EPC. Consequently, the main request is not allowable.

Auxiliary requests 1 to 4 - Amendments (Article 123(2) EPC)

7. Claim 1 of auxiliary requests 1 to 4 is also based on the same combination objected to above in the case of claim 1 of the main request, namely the combination of a sulfurized olefin containing at least 20% by weight sulfur and formula (I) (wherein residue Y is further restricted). Thus, for the same reasons as set out

above for the main request, the subject-matter of claim 1 of auxiliary requests 1 to 4 extends beyond the content of the application as filed, and these auxiliary requests are not allowable either.

#### Further points

8. For the synthesis of seal additives C and D, the patent refers to the compound/term "*2-ethyl-hexylamine*" in paragraph [0064]. During the oral proceedings, the board decided to refuse the respondent's request under Rule 139 EPC for correction of this compound/term to bis-2-ethyl-hexylamine. Since the chemical identity of seal additives C and D is not relevant to the present decision, there is no need to give reasons for the refusal of the respondent's request for correction.
9. In view of the respondent's withdrawal of the appeal, its appeal fee shall be reimbursed at 25% pursuant to Rule 103(4) (a) EPC.

#### **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:



N. Maslin

M. O. Müller

Decision electronically authenticated