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**Datasheet for the decision
of 17 December 2019**

Case Number: T 0213/15 - 3.3.02

Application Number: 06782833.5

Publication Number: 1918356

IPC: C10M163/00, C10M101/02,
C10M129/54, C10M135/36,
C10M137/04, C10M159/22,
C10M141/10, C10N40/04

Language of the proceedings: EN

Title of invention:
LUBRICANT OIL COMPOSITION

Patent Proprietor:
JXTG Nippon Oil & Energy Corporation

Opponent:
New Market Services Corporation

Headword:

Relevant legal provisions:
EPC Art. 56, 100(a)
RPBA Art. 12(4), 13(1), 13(3)

Keyword:

Inventive step - (yes)

Late-filed documents - admitted (no)

Late-filed allegation of fact - admitted (no)

Late-filed evidence - admitted (no)

Decisions cited:

Catchword:



Beschwerdekammern

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Case Number: T 0213/15 - 3.3.02

D E C I S I O N
of Technical Board of Appeal 3.3.02
of 17 December 2019

Appellant: New Market Services Corporation
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 20 January 2015
rejecting the opposition filed against European
patent No. 1918356 pursuant to
Article 101(2) EPC**

Composition of the Board:

Chairman M. O. Müller
Members: M. Maremonti
M. Blasi

Summary of Facts and Submissions

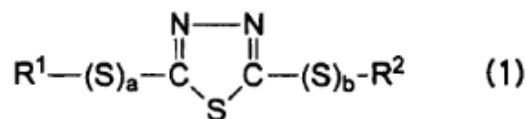
- I. The appeal by the opponent (hereinafter "appellant") lies from the decision of the opposition division to reject the opposition against European patent No. 1 918 356.
- II. The contested patent in its granted form contains eight claims, independent claim 1 of which reads as follows:

"1. A lubricating oil composition suitable for a transmission with a slip-controlled wet clutch, comprising:

a lubricating base oil;

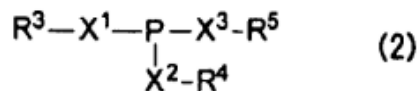
(A) an alkylsalicylic acid metal salt, wherein the component ratio of the monoalkylsalicylic acid metal salt is from 85 to 100 percent by mole, the component ratio of the dialkylsalicylic acid metal salt is from 0 to 15 percent by mole and the component ratio of the 3-alkylsalicylic acid metal salt is from 40 to 100 percent by mole;

(B) a nitrogen compound represented by the following formula (1)



wherein R¹ is a straight-chain or branched alkyl group having from 1 to 30 carbon atoms, R² is hydrogen or a straight-chain or branched alkyl group having from 1 to 24 carbon atoms, and a and b are each independently an integer of 1, 2 or 3; and

(C) an anti-wear agent being a phosphorus compound represented by the following formula (2)



wherein X^1 , X^2 and X^3 are each oxygen, two of R^3 , R^4 and R^5 are independently a hydrocarbon group having from 1 to 30 carbon atoms, and one of R^3 , R^4 and R^5 is hydrogen."

Claims 2 to 6 define specific embodiments of the composition of claim 1, while claim 7 is directed to the use of the composition of claim 1 and claim 8 to a method comprising the use of the composition of claim 1.

III. The following documents were among those cited during the opposition proceedings:

D1: WO 89/12666 A

D4: EP 1 526 170 A

D5: EP 1 561 799 A

D6: EP 1 598 412 A

D8: EP 1 308 496 A

The opposition division came to the conclusion that the subject-matter of claim 1 as granted involved an inventive step and that, therefore, the ground for opposition under Article 100(a) EPC and Article 56 EPC did not prejudice the maintenance of the patent as granted.

IV. In its statement of grounds of appeal, the appellant contested the reasoning of the opposition division and maintained that the claimed subject-matter did not involve an inventive step. It corroborated its objection by filing the following new documents:

D11: US 6,372,696 B1

D12: US 5,750,477

V. In its reply to the statement of grounds of appeal, the patent proprietor (hereinafter "respondent") rebutted the views of the appellant and maintained that the ground for opposition under Article 100(a) and Article 56 EPC did not prejudice the maintenance of the patent as granted. It corroborated its point of view by filing, *inter alia*, an Enclosure D, containing, *inter alia*, a new comparative example 4.

VI. The parties were summoned to oral proceedings following their respective requests.

In preparation for the oral proceedings, the board issued a communication in which it expressed the preliminary opinion that documents D11 and D12 should not be admitted into the proceedings and that the ground for opposition under Article 100(a) EPC in combination with Article 56 EPC did not prejudice the maintenance of the patent as granted.

VII. In its response dated 26 September 2019, the appellant corroborated its objection for lack of inventive step by filing the following new items of evidence:

Affidavit of Susie Hurley dated 26 September 2019

Japanese Standard JASO M349:1998 and English translation thereof

Japanese Standard JASO M349:2001 and English translation thereof

Bayer, "Mechanical Wear Fundamentals and Testing", Dekker, New York, 2004, pages 3 and 4

VIII. By letter dated 25 October 2019, the respondent filed four sets of claims to be considered as auxiliary requests 1 to 4.

IX. In a subsequent letter, the appellant filed further documents, to be considered in case the board would admit one of the respondent's auxiliary requests into the proceedings.

X. Oral proceedings before the board were held on 17 December 2019.

XI. The parties' requests

The appellant requested that the appealed decision be set aside and the patent be revoked.

It further requested that auxiliary requests 1 to 4 filed by the respondent on 25 October 2019 not be admitted into the proceedings.

It also requested that comparative example 4 filed by the respondent with its reply to the statement of grounds of appeal not be admitted into the proceedings.

The appellant further requested that Ms Hurley be allowed to make oral submissions on technical issues as accompanying person in accordance with Enlarged Board decision G 4/95.

As regards the appellant's request that comparative example 4 filed by the respondent with its reply to the statement of grounds of appeal not be admitted into the

proceedings, the board did not base its decision on this comparative example. Therefore, a decision on the admittance of this comparative example was not needed.

The respondent requested that the appeal be dismissed, implying maintenance of the patent as granted.

Alternatively, it requested that the patent be maintained on the basis of the claims of one of auxiliary requests 1 to 4 as filed by letter dated 25 October 2019.

The respondent further requested that documents D11 and D12 not be admitted into the proceedings.

During oral proceedings, the respondent also requested that the appellant's objection that the values reported in the examples and comparative examples of the contested patent were meaningless not be admitted into the proceedings. It also requested that Ms Hurley not be allowed to speak on this issue.

XII. The arguments of the appellant, where relevant to the present decision, may be summarised as follows:

Admittance of documents D11 and D12 and of the inventive step objection based on them:

- The filing of new evidence with the statement of grounds of appeal was allowed under Article 12(2) RPBA. Only as an exception, such new evidence should not be admitted into the proceedings under Article 12(4) RPBA.
- For example, lack of relevance of a document or abuse of procedure might justify non-admittance under Article 12(4) RPBA. It would be contrary to the gist of Article 12(2) RPBA to reject relevant

evidence filed with the statement of grounds of appeal.

- The relevance of D11 was evident from the fact that the respondent considered it necessary to prepare comparative example 4. The filing of D11 did not represent an abuse of procedure since the respondent had sufficient time to prepare such a comparative example.
- Moreover, the opposition division did not regard D4 as a suitable closest prior art for the assessment of inventive step due to a wrong interpretation of the field of the invention. This justified the search for more relevant documents.
- The EPC stipulated that no invalid patents should be maintained. D11 was highly relevant for proving lack of inventive step and was submitted as early as possible in the appeal proceedings. Thus it should be admitted.

Admittance of the objection raised with the letter dated 26 September 2019 and of the affidavit and of the oral submissions of Ms Hurley:

- The objection that the values reported in the examples and comparative examples of the contested patent were meaningless was not based on new evidence.
- In fact, the JASO standard applied to interpret the values of the patent was cited in paragraph [0100] of the patent itself. The objection thus represented what the skilled person would have inferred from the reported values and from the cited JASO standard.

- The affidavit and the oral submissions of Ms Hurley would make evident how the values of the contested patent would have been understood and evaluated by a person skilled in the art. This was highly relevant for the assessment of inventive step.
- It would be demonstrated that the discrepancies between the teaching of the contested patent and the JASO standard mentioned in paragraph [0100] of the patent, *inter alia*, in terms of applied surface pressure, measurement of du/dV and friction material, rendered the obtained results meaningless. Moreover, the differences between the values of the examples and of the comparative examples were within the experimental error.
- Non-admittance of this objection would imply that no meaningful decision would be taken.
- This issue had first come to the appellant's attention when preparing for the case, and the corresponding objection was promptly submitted. In fact, it was raised almost three months before oral proceedings. The respondent was aware of the JASO standard and thus had sufficient time to react. Moreover, in its reply dated 25 October 2019, the respondent did not contest this objection.
- Thus, the objection should be admitted into the proceedings.

Inventive step starting from D4 as closest prior art:

- The claimed composition only differed from the disclosure of D4 in its component (B).
- Assuming that the technical problem was the improvement of the anti-wear properties, the

inclusion of component (B) in the composition of D4 was obvious.

- In fact, D4 itself disclosed in paragraph [0107] that various additives might be added to the lubricating composition to enhance its performances.
- Faced with the task to provide additives able to improve anti-wear properties, the skilled person would have found in D8 (paragraphs [0007] and [0023], table 2 and the claims) the information that mercaptothiadiazoles, specifically 2,5-bis-(tert-nonyldithio)-1,3,4-thiadiazole, strongly improve anti-wear characteristics especially in combination with hydrocarbyl esters of phosphorous acid, i.e. compounds falling under component (C) of claim 1.
- Therefore, the skilled person would have been prompted to combine D4 with D8 thus arriving at the subject-matter of claim 1.
- The improvement of anti-shudder properties, allegedly also shown in the contested patent, had to be regarded as a bonus effect. It was not mandatory in the problem-solution approach to include all effects mentioned in the patent.
- The skilled person had merely to follow a one-way street to come to the claimed composition since D8 pointed to combine components (B) and (C) according to claim 1.
- It had to be concluded that the subject-matter of claim 1 lacked an inventive step when starting from D4 as the closest prior art.

Inventive step starting from D8 as closest prior art:

- The claimed composition only differed from the disclosure of D8 in its component (A).
- By comparing example 1 and comparative example 2 of the contested patent, it could be seen that the addition of component (A) worsened the anti-wear properties, while the improvement of the anti-shudder characteristics was not significant.
- According to D8, the performances of the composition disclosed therein may be improved by additives. The skilled person faced with the task to improve anti-wear properties would have found in D4 the teaching that component (A) of claim 1 provided excellent anti-wear properties. This was evident from all examples of D4. A similar teaching was also contained in D5. Thus the skilled person would have had an incentive to include component (A) into the composition of D8.
- Therefore, it had to be concluded that the subject-matter of claim 1 lacked an inventive step also starting from D8 as the closest prior art.

XIII. The arguments of the respondent, where relevant to the present decision, may be summarised as follows:

Admittance of documents D11 and D12 and of the inventive step objection based on them:

- Already in its preliminary opinion issued in preparation for oral proceedings, the opposition division had indicated that D4 was not regarded as a suitable closest prior art for the assessment of inventive step.

- This preliminary opinion was confirmed by the opposition division in the impugned decision. Therefore, there was nothing surprising in the appealed decision justifying the filing of new documents D11 and D12 in appeal proceedings. These documents should have been filed with the notice of opposition or after receiving the preliminary opinion of the opposition division at the latest.
- Additionally, these two documents were only used for objecting to inventive step, i.e. they were not more relevant than the documents already on file.
- As a consequence, D11 and D12 should not be admitted.

Admittance of the objection raised with letter dated 26 September 2019 and of the affidavit and of the oral submissions of Ms Hurley:

- The objection that the values reported in the examples and comparative examples of the contested patent were meaningless had been raised by the appellant less than three months before oral proceedings in appeal.
- The validity of the reported values had never been objected before, despite the opposition division having relied on these values in its assessment of inventive step. The objection should have been raised with the statement of grounds of appeal at the latest.
- This objection contained a completely new line of argumentation based on new documents, i.e. the JASO standards and the affidavit of Ms Hurley. The respondent, which moreover resided in Japan, had

not been given sufficient time to react to this objection appropriately.

- If the objection was admitted, a postponement of the oral proceedings would become necessary to allow the respondent to deal with it.
- Therefore, this new objection should not be admitted and Ms Hurley should not be allowed to make oral submissions on this issue.

Inventive step starting from D4 as closest prior art:

- The claimed composition differed from the disclosure of D4 in its component (B). The values reported in the contested patent demonstrated that the inclusion of component (B) not only improved the anti-wear properties but also the anti-shudder properties after deterioration.
- Thus, the technical problem had to be formulated according to both technical effects.
- Even assuming that the skilled person would only have aimed at improving anti-wear properties, D4 already disclosed that this might be obtained by including several compounds other than component (B) into the composition, see paragraph [0109]. In D4, component (B) was merely mentioned in paragraph [0117] as a metal passivator.
- D8 did not mention anti-shudder properties. It merely concerned the improvement of anti-wear, basically obtained by adding hydrocarbyl esters of a phosphorous acid.
- Therefore, the skilled person would not have recognised from D8 that component (B) improved

anti-shudder properties. Such an improvement was not a bonus effect since no one-way street was available to the skilled person to add component (B) to the composition of D4.

- It had to be concluded that the claimed subject-matter involved an inventive step when starting from D4 as the closest prior art.

Inventive step starting from D8 as closest prior art:

- The claimed composition differed from the disclosure of D8 in its component (A).
- The values reported in the contested patent revealed an improvement in anti-shudder properties. The technical problem should be formulated accordingly.
- There was no indication in D4 nor in other documents cited by the appellant that anti-shudder properties might be improved by adding component (A).
- It had to be concluded that the claimed subject-matter involved an inventive step when starting from D8 as the closest prior art.

Reasons for the Decision

Documents D11 and D12 - admittance into the proceedings -
Article 12(4) RPBA

1. Under Article 12(4) RPBA the board has the power to hold inadmissible *inter alia* facts and evidence which could have been presented during the proceedings before the opposition division even though they were presented

by the appellant in the notice of appeal or the statement of grounds of appeal, relate to the case under appeal and comply with Article 12(2) RPBA.

- 1.1 The appellant put forward (statement of grounds of appeal, page 2) that it was not aware of documents D11 and D12 *"until the adverse contested decision was taken which surprisingly considered D1 to be the exclusive closest prior art thereby effectively narrowing the pool of eligible "closest prior art" documents to documents concerning anti-shudder performance in CVTs with a metal belt"*. Before this adverse decision, the search for relevant documents *"had been stopped once a number of viable problem-solution approaches had been found"*. The appellant also argued (XII, *supra*) that, due to their high relevance, D11 and D12 should be admitted in accordance with the gist of Article 12(2) RPBA.
- 1.2 The board disagreed. In the notice of opposition, the appellant had presented its arguments to prove lack of inventive step on the basis of several documents taken as the closest prior art, *inter alia*, D1. Already in its preliminary opinion issued in preparation for the oral proceedings, the opposition division had indicated that D1 represented the closest prior art while the other documents invoked by the appellant, *inter alia* also D4, were regarded as not suitable. The opposition division after having considered the various approaches taken by the appellant confirmed this opinion (impugned decision, point 2.2.2). However, it also assessed inventive step starting from the disclosures of either D6 or D8 (impugned decision, point 2.2.4).
- 1.3 The board did not see anything surprising in the way the opposition division proceeded, which could have

justified the filing of D11 and D12 only in appeal. In fact, the late-filing of D11 and D12 is regarded as to be rather the result of the negative decision taken by the opposition division, as a further, but late, attempt to prove lack of inventive step with additional potentially better documents.

1.4 Under Article 12(2) RPBA, the statement of grounds of appeal shall contain the party's complete case, expressly specifying *inter alia* all evidence relied on. The framework of appeal proceedings is however restricted by Article 12(4) RPBA (1, *supra*). This is in accordance with the principal purpose of appeal proceedings to review the decision under appeal and not to start new opposition proceedings. The admittance of D11 and D12 would have led instead to a new inventive step objection which would have had to be considered during the appeal proceedings for the first time.

1.5 Therefore, the board came to the conclusion that documents D11 and D12 could and should have been filed during the proceedings before the opposition division. By exercising its discretion under Article 12(4) RPBA, the board decided not to admit these documents as well as the inventive step objection based on them into the appeal proceedings.

Admittance of the objection raised by the appellant with the letter dated 26 September 2019 and the affidavit and the oral submissions of Ms Hurley - Article 13(1), (3) RPBA

2. The appellant requested to admit its objection that the values reported in the examples and comparative examples of the contested patent were meaningless. This objection was corroborated *inter alia* by the affidavit of Ms Hurley which should also be admitted. Along the

same line, it requested that Ms Hurley be allowed to speak on this issue during oral proceedings.

- 2.1 The board rejected these appellant's requests for the following reasons.
 - 2.1.1 The contested patent reports in table 1 on pages 13 to 15 the results of several examples and comparative examples in terms of initial anti-shudder properties, anti-shudder properties after deterioration and anti-wear properties. The tests used to assess these properties are mentioned in paragraphs [0100] to [0102]. According to paragraph [0103], the reported values demonstrate the technical effects achieved by compositions of the invention.
 - 2.1.2 The opposition division based its acknowledgement of inventive step on the technical effects shown by these values (impugned decision, point 2.2.3).
 - 2.1.3 Despite this finding, the appellant did not dispute the technical significance of the values reported in the contested patent in its statement of grounds of appeal. In fact, the appellant only raised a corresponding objection in its letter dated 26 September 2019, i.e. less than three months before the oral proceedings before the board.
 - 2.1.4 The appellant's objection (XII, *supra*) was based on new evidence, namely the affidavit of Ms Hurley also filed on 26 September 2019. Moreover, the appellant alleged a new fact, namely, that the values reported in the examples and comparative examples of the contested patent were meaningless. The appellant based its allegation on various reasons, in particular it alleged that the discrepancies between the way in which anti-shudder properties were measured in the contested

patent and the instructions given in the JASO standard M349-98 cited in paragraph [0100] of the contested patent would have rendered the reported values meaningless. Moreover, all values would have been within the experimental error foreseen by said JASO standard.

2.1.5 Therefore, the appellant's objection amounted to a new allegation of fact, based on new evidence, submitted late in appeal proceedings. The board has under Article 114(2) EPC the discretion not to admit such an objection which was not submitted in due time.

2.1.6 The objection was brought forward by the appellant less than three months before oral proceedings. It thus represented an amendment of the appellant's case within the meaning of Article 13(1) and (3) RPBA.

Under Article 13(1) RPBA, the board exercises its discretion in view of *inter alia* the complexity of the new subject-matter submitted, the state of the proceedings and the need for procedural economy.

Under Article 13(3) RPBA, amendments of a party's case submitted after arrangement of the oral proceedings shall not be admitted if they raise issues which the board or the other party cannot reasonably be expected to deal with without adjournment of the oral proceedings.

2.1.7 Contrary to the appellant's view (XII, *supra*), the board considered that the objection raised complex issues at a very late stage of the proceedings. In fact, admitting this new objection would have required assessing what influence, if any, the alleged discrepancies between the teaching of the contested patent and the JASO standard mentioned in paragraph

[0100] of the patent, *inter alia*, in terms of applied surface pressure, measurement of du/dV and friction material, had on the obtained results and whether the differences between the values of the examples and of the comparative examples were within the experimental error. This completely new assessment at such a late stage of the proceedings would also have been contrary to procedural economy.

Moreover, the respondent could not reasonably be expected to deal with it without adjournment of the oral proceedings. That the JASO standard was mentioned in the contested patent and thus known to the respondent is irrelevant. The appellant's objection was not based on this standard as such but related to alleged consequences said to arise from discrepancies between this standard and the way certain properties were measured in the contested patent. The board could thus accept the respondent's submissions that it would have needed time to check this issue with its technical experts and possibly to provide experimental counter-evidence. The board also agreed that in the circumstances of the present case less than three months was not sufficient time to appropriately respond to the complex issues raised by the appellant.

2.2 In exercising its discretion under Article 114(2) EPC and with due regard to Article 13(1) and (3) RPBA, the board decided not to admit the new allegation of fact that the values reported in the examples and comparative examples of the contested patent were meaningless.

For the same reasons, the board decided not to admit the appellant's submissions in the letter dated 26 September 2019 relating to this allegation of fact

and the related affidavit of Ms Hurley dated 26 September 2019. The board also decided that Ms Hurley was not allowed to speak on this issue during oral proceedings.

Ground for opposition under Article 100(a) EPC - inventive step under Article 56 EPC

3. The closest prior art

At the oral proceedings, the appellant only maintained its inventive step objections starting from either D4 or D8 as the closest prior art. These two objections are considered in turn here below.

4. Document D4

D4 discloses (paragraphs [0007] to [0012], claims 1 and 6) a lubricating oil composition, comprising *inter alia* a lubricating base oil and components (A) and (B). Component (A) as disclosed in paragraph [0008] of D4 corresponds to component (A) as defined in claim 1 as granted. Component (B) as disclosed in claim 6 of D4 corresponds to component (C) of claim 1 as granted with the exception that D4 does not disclose the requirement that one of R⁵, R⁶ or R⁷ (corresponding to R³, R⁴ and R⁵ in claim 1 as granted) is hydrogen. According to D4 (paragraphs [0122] to [0124]), the lubricating oil composition disclosed therein, though preferably used for internal combustion engines, can also be used as "*lubricating oils for automatic or manual transmission driving mechanisms*". Therefore, the lubricating oil composition of D4 is also "*suitable for a transmission with a slip-controlled wet clutch*" as required by claim 1 as granted.

Document D4 thus represents a suitable starting point for the assessment of inventive step.

5. The technical problem

5.1 It was undisputed that the subject-matter of claim 1 as granted differed from the composition of D4 at least in that component (B) is included.

5.2 The contested patent reports in table 1 the comparison between *inter alia* examples 1 to 3 (compositions comprising components (A), (B) and (C) according to claim 1) and comparative example 1, in which a composition only comprising components (A) and (C) was used, i.e. representative of the compositions taught by D4.

Examples 1 to 3 perform better in both anti-shudder properties after deterioration (du/dv equal to 0.004 and 0.005 in examples 1 to 3 vs. -0.004 for comparative example 1) and anti-wear properties (0.45, 0.43 and 0.47 mm wear-scar diameter in examples 1 to 3 vs. 0.65 for comparative example 1).

5.3 On the basis of these results, the technical problem can be formulated as how to improve both anti-shudder properties after deterioration and anti-wear properties of the composition of D4.

5.4 The appellant's allegation that said values reported in table 1 of the contested patent were meaningless was not admitted into the proceedings (2.2, *supra*). The board has no reasons to doubt that the reported values are technically significant. The values convincingly demonstrate that compositions according to claim 1 solve the above-mentioned technical problem, which thus also represents the objective technical problem.

6. Obviousness of the claimed solution

6.1 The appellant argued (XII, *supra*) that the skilled person faced with the task to improve the anti-wear performance would have been prompted by D8 to include the mercaptothiadiazole disclosed therein, which fell under the definition of component (B) required by claim 1, into the composition of the closest prior art. This was a one-way street, so that the improvement of the anti-shudder properties after deterioration was merely a bonus effect.

6.2 The board disagrees. The improvement of the anti-shudder properties of the lubricating composition is crucial to the invention described in the contested patent (paragraphs [0001], [0009], [0096], [0097] and [0103]) and the basis of the objective technical problem. For this reason alone, it cannot be ignored in the assessment of the obviousness of the claimed solution.

6.3 Furthermore, even if one followed the appellant's assumption that the skilled person would have limited their search to compounds only improving anti-wear properties, they would have found in D4 the information that anti-wear properties were provided by component (B) disclosed therein (see page 2, line 50, where component (B) is denoted an anti-wear agent), which, as mentioned above, comes close to component (C) of claim 1 as granted.

6.4 Still in D4 (paragraphs [0107] and [0109]), the skilled person would have learnt that in order to further enhance the performance characteristics of the composition disclosed therein, *inter alia* other anti-wear agents may be included. However, among the listed

compounds, none falls under component (B) as required by claim 1 as granted.

- 6.5 In paragraph [0117], D4 discloses 1,3,4-thiadiazolepolysulfide. Even though the type of the two substituents of the polysulfide groups is not disclosed (claim 1 as granted requires one substituent to be an alkyl substituent R^1 having 1 to 30 carbon atoms and the second substituent R^2 to be hydrogen or to be an alkyl group having 1 to 24 carbon atoms), and the number of sulphur atoms is not specified (claim 1 requires this number a and b to be 1 to 3), this component of D4 comes at least close to component (B) as given in claim 1 as granted. However, this component is mentioned in D4 only in the context of "*metal passivators*".
- 6.6 Document D8 discloses (paragraphs [0023] to [0028], examples 1 to 6 in paragraphs [0047] to [0050], tables I and II, claims 2 to 4) that in particular triazoles and mercaptothiadiazoles may be added to the compositions disclosed therein, which contain hydrocarbyl esters of phosphorous acid, falling under the definition of component (C) of claim 1 as granted, to improve anti-wear performances. Among the mercaptothiadiazoles, 2,5-bis-(tert-nonyldithio)-1,3,4-thiadiazole is specifically mentioned (claim 4), which falls under the definition of component (B) of claim 1 as granted.
- 6.7 Thus, even if the skilled person would have confined their search only to the improvement of anti-wear properties, a number of alternative solutions would have been available within the teaching of both D4 and D8. In other words, no "one-way street" situation would have forced the skilled person to necessarily select a

compound falling under component (B) of claim 1, when addressing the anti-wear part of the objective technical problem.

Also for this reason, the anti-shudder part of the objective technical problem cannot be ignored.

It was undisputed that the provision of anti-shudder properties, especially after deterioration, was mentioned neither in D4 nor in D8. It follows that the skilled person would have not been prompted to combine the teachings of D4 and D8 when seeking a solution to the posed technical problem.

6.8 The board concludes that, starting from D4 as the closest prior art, the subject-matter of claim 1 as granted, and by the same token of all remaining claims, involves an inventive step within the meaning of Article 56 EPC.

7. Document D8

Document D8 may also be seen as a suitable starting point for the assessment of inventive step. In fact, this document discloses (claims 1 to 4 and 8 and paragraph [0039]) the use of a lubricating oil composition, comprising *inter alia* a lubricating base oil and components (B) and (C) as defined in claim 1 as granted for lubricating a transmission. More specifically, the 2,5-bis-(tert-nonyldithio)-1,3,4-thiadiazole of claim 4 of D8 corresponds to component (B) of claim 1 as granted. The dialkyl hydrogenphosphite of claim 8 of D8 is preferably di-n-butyl-hydrogen phosphite (paragraph [0039]) which corresponds to component (C) of claim 1 as granted. Since the lubricating oil composition of D8 is suitable for lubricating a transmission, it is also "suitable

for a transmission with a slip-controlled wet clutch" as required by claim 1 as granted.

8. The technical problem

8.1 It was undisputed that the subject-matter of claim 1 as granted differed from the composition of D8 at least in that component (A) is included.

8.2 The contested patent reports in table 1 the comparison between *inter alia* examples 1, 3 and 4 (compositions comprising components (A), (B) and (C)) and comparative example 2, in which a composition only comprising components (B) and (C) was used, i.e. representative of the compositions taught by D8.

The examples perform better in both initial anti-shudder properties and anti-shudder properties after deterioration (initial du/dv equal to 0.007, 0.006 and 0.005 in examples 1, 3 and 4 vs. -0.003 for comparative example 2; du/dv after deterioration equal to 0.004, 0.005 and 0.002 in examples 1, 3 and 4 vs. -0.006 for comparative example 2).

8.3 On the basis of these results, the technical problem can be formulated as how to improve both initial and after deterioration anti-shudder properties.

8.4 The appellant's allegation that said values reported in table 1 of the contested patent were meaningless was not admitted into the proceedings (2.2, *supra*). The board has no reasons to doubt that the reported values are technically significant. The values convincingly demonstrate that compositions according to claim 1 solve the above-mentioned technical problem, which thus also represents the objective technical problem.

9. Obviousness of the claimed solution

9.1 The appellant argued (XII, *supra*) that the skilled person faced with the task to improve anti-wear performances would have been prompted by D4 to include component (A) disclosed therein in paragraph [0008] as well as in all examples, into the composition of D8. This component (A) of D4 corresponded to component (A) of claim 1 as granted.

9.2 The board disagrees. The values reported in table 1 of the contested patent show that the composition of comparative example 2, representative of that of D8, had comparable anti-wear performances as the compositions of examples 1, 3 and 4 according to claim 1 (0.45, 0.47 and 0.43 mm wear-scar diameter in examples 1, 3 and 4 vs. 0.43 mm for comparative example 2). Therefore, the improvement of anti-wear properties is not part of the posed technical problem, which only concerns improvement of the anti-shudder characteristics. When starting from D8, the skilled person would have had no reasons to seek an improvement in anti-wear.

9.3 Document D4, though teaching (paragraphs [0007] to [0012], table 1, claims 1 and 6) the inclusion of a compound covering component (A) as defined in claim 1 as granted in the lubricating oil compositions disclosed therein, does not link this inclusion to the improvement of anti-shudder properties. Actually, the latter are not mentioned in D4.

It follows that the skilled person would have not been prompted to combine the teachings of D8 and D4 when seeking a solution to the posed technical problem.

9.4 As regards the objection of lack of inventive step starting from D8 in combination with document D5, presented by the appellant in writing, the board notes that D5 (claim 1) describes the inclusion of metal salicylates, particularly alkyl metal salicylates, in the lubricating oil compositions disclosed therein as deterging agents. However, anti-shudder properties, let-alone their improvement, are not mentioned in this document. As a consequence, the skilled person would have not found in D5 either any incentive to include component (A) as defined in claim 1 as granted into the composition disclosed in D8 when aiming at solving the posed technical problem.

The board concludes that starting from D8 as the closest prior art, the subject-matter of claim 1 as granted, and by the same token of all remaining claims, involves an inventive step within the meaning of Article 56 EPC.

Conclusions

10. Other objections of inventive step starting from documents other than D4 or D8 as the closest prior art, initially put in writing by the appellant, were not maintained at the oral proceedings.
11. For the reasons set out above, the board concludes that the subject-matter of claim 1 as granted, and by the same token of all remaining claims, involves an inventive step within the meaning of Article 56 EPC and that therefore, the corresponding ground for opposition under Article 100(a) EPC does not prejudice the maintenance of the patent as granted.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



N. Maslin

M. O. Müller

Decision electronically authenticated