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**Datasheet for the decision  
of 12 May 2022**

**Case Number:** T 0262/19 - 3.3.02

**Application Number:** 13742227.5

**Publication Number:** 2880138

**IPC:** C10M141/06

**Language of the proceedings:** EN

**Title of invention:**

LUBRICATING OIL COMPOSITION FOR INTERNAL COMBUSTION ENGINES

**Patent Proprietor:**

Shell Internationale Research Maatschappij B.V.

**Opponent:**

Infineum International Limited

**Relevant legal provisions:**

EPC Art. 56, 123(2), 84

RPBA Art. 12(4)

**Keyword:**

Inventive step

Amendments

Claims - clarity

Late-filed request - submitted with the statement of grounds  
of appeal

**Decisions cited:**

G 0003/14



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Case Number: T 0262/19 - 3.3.02

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.02**  
**of 12 May 2022**

**Appellant:** Shell Internationale Research Maatschappij B.V.  
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**Representative:** Shell Legal Services IP  
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**Decision under appeal:** **Decision of the Opposition Division of the  
European Patent Office posted on 21 November  
2018 revoking European patent No. 2880138  
pursuant to Article 101(3)(b) EPC.**

**Composition of the Board:**

**Chairman** M. O. Müller  
**Members:** A. Lenzen  
F. Bostedt

## **Summary of Facts and Submissions**

- I. The present decision concerns the appeal filed by the patent proprietor (appellant) against the decision of the opposition division to revoke European patent No. 2 880 138.
- II. The following documents are referred to in the present decision:
- D1 WO 93/21288 A1  
D7 corrected version of the examples of the patent  
(2 pages)  
D8 WO 2011/070141 A2  
D9 WO 2014/019981 A1
- III. With its statement of grounds of appeal, the appellant filed sets of claims of first to fourth auxiliary requests.
- IV. In preparation for the oral proceedings, scheduled at the parties' request, the board issued a communication pursuant to Article 15(1) RPBA 2020.
- V. By letter dated 17 March 2022, the appellant withdrew its request for oral proceedings and indicated that it did not intend to take part in the scheduled oral proceedings. For each set of claims filed with its statement of grounds of appeal, the appellant also filed an adapted description.
- VI. Oral proceedings before the board were held by videoconference on 12 May 2022. Only the opponent (respondent) was present. During the oral proceedings, the board decided not to admit the first auxiliary

request into the proceedings. At the end of the oral proceedings, the chair announced the order of the present decision.

VII. The appellant requested in writing that the decision under appeal be set aside and

- that the patent be maintained as granted, thereby implying that the opposition should be rejected (main request),
- that the patent be maintained in amended form based on one of the first to fourth auxiliary requests, the claims of each of these requests having been filed with the appellant's statement of grounds of appeal and the adapted descriptions of these requests having been filed with its letter of 17 March 2022.

The opponent (respondent) requested

- that the appeal be dismissed,
- that the first auxiliary request not be admitted into the proceedings.

VIII. The appellant's appeal case, as far as relevant for the present decision, can be summarised as follows.

*Main request*

- Only D8 could be considered as the closest prior art. The appellant's experimental results in D7 showed that the subject-matter of claim 1 involved an inventive step.

*Auxiliary requests*

- The amendments in the claims of the auxiliary requests met the requirements of Article 123(2) EPC. Further, the purpose of the use ("*for providing improved emulsion stability in said composition*") had been defined in claim 1 of the third and fourth auxiliary requests as being "*in accordance with ASTM D7563*". The opposition division's reasoning for its finding of lack of clarity was, therefore, irrelevant.

IX. The respondent's appeal case, as far as relevant for the present decision, can be summarised as follows.

*Main request*

- The subject-matter of claim 1 was not novel over D1 or at least did not involve an inventive step over that document as the closest prior art. D9 showed that the effect invoked by the appellant in support of an inventive step was not achieved over the entire breadth of claim 1. The objective technical problem was to provide an alternative lubricating oil composition for internal combustion engines. The solution to this problem was obvious, *inter alia*, because component (A) of claim 1 merely defined a conventional group of base oils. The skilled person would have replaced the base oil of D1 with such a conventional base oil without the need for any inventive skills. Therefore, the subject-matter of claim 1 did not involve an inventive step.

*First auxiliary request*

- With its letter dated 16 August 2018, the appellant had filed a first auxiliary request. This was abandoned during the oral proceedings before the opposition division. The first auxiliary request on appeal related to the same subject-matter and should not be admitted.

*Second auxiliary request*

- The application as originally filed disclosed a composition which was open to further ingredients. The passage on page 17, lines 3 to 10, could not be understood as disclosing a composition consisting of components (A), (B), (C) and (D) only. Consequently, the subject-matter of claim 1 of the second auxiliary request was not directly and unambiguously disclosed in the application as originally filed.

*Third and fourth auxiliary requests*

- The purpose of the use in claim 1 of the third and fourth auxiliary requests resulted in a lack of clarity.

**Reasons for the Decision**

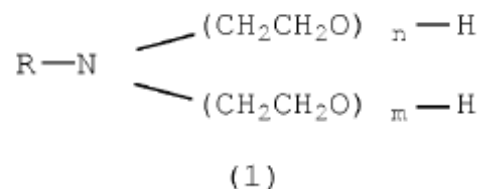
Main request (patent as granted) - inventive step

1. Claim 1 as granted reads as follows:

*"A lubricating oil composition for internal combustion engines characterised in that it contains:*

- (A) at least one base oil selected from the group consisting of base oils of Groups 2, 3 and 4 in the American Petroleum Institute base oil categories with kinematic viscosity of from 3 to 12 mm<sup>2</sup>/s at 100°C and viscosity index of from 100 to 180,
- (B) a monoglyceride with a hydrocarbon group having from 8 to 22 carbon atoms which is a glycerine fatty acid ester with the fatty acid ester bonded to one of the three hydroxyl groups of the glycerine, wherein the monoglyceride has a hydroxyl value of from 150 to 300 mgKOH/g, and wherein the monoglyceride is present at a level of from 0.3 to 2.0 mass% based on the total mass of the composition, and
- (C) at least one ethylene oxide adduct selected from the group consisting of monoalkyl and monoalkenyl amine ethylene oxide adducts shown by Formula (1) below,

Formula (1):



wherein R is a C<sub>14</sub>-C<sub>22</sub> hydrocarbon group, n and m are independently either 1 or 2, wherein the ethylene oxide adduct is present at a level of from 0.4 to 1.5 mass% based on the total mass of the composition."

- 2. Claim 1 relates to a lubricating oil composition containing three components: a base oil (A), a monoglyceride (B) and an ethylene oxide adduct (C). Due to its open definition ("contains"), said composition



can contain components other than (A), (B) and (C). In particular, the lubricating oil composition according to claim 1 could contain not only base oils of the American Petroleum Institute (API) base oil categories 2, 3 and 4 having the required viscosity properties. Instead, it could further contain, for example, an arbitrary base oil such as a base oil of API category 1.

3. Closest prior art - possible starting point

3.1 The patent (see paragraph [0014]) seeks to provide a lubricating oil composition for internal combustion engines which not only affords good wear resistance and fuel economy but also exhibits good emulsion stability. If the lubricating oil composition has high emulsion stability, it will keep water (a by-product of combustion) in an emulsified state, thereby preventing it from separating, coming into contact with metal surfaces and causing them to corrode. As further set out in paragraph [0015] of the patent, the monoglyceride component (B) of claim 1, which acts as a friction modifier and thereby imparts wear resistance and fuel economy, contributes to a reduction in emulsion stability when included in the base oil component (A) of claim 1. The reduction in emulsion stability caused by component (B) can be mitigated or prevented by the inclusion of component (C).

3.2 In view of this teaching of the patent, there was disagreement between the parties as to whether, in addition to D8, D1 could also serve as a starting point for the assessment of inventive step. According to the appellant, the disclosure of D8 was closer than that of D1 to the subject-matter of claim 1. Consequently, D8

was the closest prior art and the assessment of inventive step could only start from D8.

- 3.3 The board does not agree with this contention. The concept of the closest prior art does not mean that a piece of prior art must be disregarded in the assessment of inventive step merely because it is allegedly not as close to the claimed subject-matter as the closest prior art. Instead, the decisive question when considering whether to take into account an allegedly more remote piece of prior art is whether or not this prior art represents a suitable starting point (Case Law of the Boards of Appeal of the European Patent Office, ninth edition, 2019, (CLBA) I.D.3.1). With regard to D1, this question must be answered in the affirmative.

D1 (abstract) provides an improved lubricating oil composition for automotive internal combustion engines and transmissions. This composition comprises an oil of lubricating viscosity having mixed therewith a minor amount of a friction modifier composition which reduces the coefficient of friction between moving mechanical parts, thereby providing for enhanced fuel economy. The friction modifier composition comprises a combination of two classes of compounds, the preferred representatives of which are according to components (B) and (C) of claim 1 (see below). This combination of compounds provides for synergistic fuel economy effects.

Thus, D1 pertains to the same field of application as the patent (lubricating oil compositions for internal combustion engines). Furthermore, it employs compounds according to components (B) and (C) of claim 1 to achieve one of the goals that the patent seeks to

achieve, namely enhanced fuel economy. Although D1 is silent on another problem mentioned in the patent, namely the need to improve emulsion stability, D1 and the patent have such a large overlap that the former can nevertheless be considered as a suitable starting point in the present case.

4. Distinguishing features

4.1 D1 (claims 1 and 12) discloses

*"A lubricating oil composition comprising a major amount of an oil of lubricating viscosity having blended therewith:*

*i) from about 0.01 to about 1.0% by weight of an alkoxyated amine [...] wherein said amine comprises N,N-bis(2-hydroxy-ethyl) tallowamine*

*ii) from about 0.1 to about 1.0% by weight of at least one ester of a fatty acid [...] wherein said ester comprises glycerol monooleate."*

4.2 It was common ground between the parties that glycerol monooleate and N,N-bis(2-hydroxyethyl) tallowamine are compounds according to components (B) and (C) of claim 1 of the main request respectively.

The ranges disclosed in D1 for the amounts of glycerol monooleate (about 0.1 to about 1.0% by weight) and N,N-bis(2-hydroxyethyl) tallowamine (about 0.01 to about 1.0% by weight) in the above combination of claims 1 and 12 overlap with the ranges for components (B) (0.3 to 2.0 mass%) and (C) (0.4 to 1.5 mass%) of claim 1 of the main request. This also applies in a comparable way with regard to the ranges described in D1 as the most

preferred for these two compounds (see page 13, lines 3 to 10: about 0.2 to 0.5% by weight in both cases). There is no pointer in D1 to both areas of overlap.

On this basis, in its communication pursuant to Article 15(1) RPBA 2020, the board set out the following distinguishing features:

- Component (A) is not disclosed in D1.
- As far as the overlap between the ranges for the amounts of components (B) and (C) is concerned, the ranges of claim 1 of the main request can only be arrived at after a double selection from D1.

This was not disputed by either of the parties in the further course of the appeal proceedings.

5. Technical effect linked to the distinguishing feature(s) and objective technical problem

5.1 The appellant referred to D7. It submitted that lubricating oil compositions containing only API base oils of categories 2 and 3 as component (A) and glyceryl monooleate as component (B) could not emulsify added water. At 25 °C, there was a phase separation into an oil phase and a water phase. When increasing amounts of oleyl diethanolamine, i.e. a compound according to component (C) of claim 1, were added to such lubricating oil compositions, separation into two phases was avoided only if the amount was within the claimed range. This indicated that the distinguishing feature of selecting the amount of component (C) was associated with an increase in emulsion stability.

5.2 However, the effect invoked by the appellant in support of an inventive step is not achieved over the entire breadth of claim 1.

D9 (table 2 on page 33, examples 1 to 4) discloses lubricating oil compositions containing a mixture of base oils of API categories 3 and 1 and glycerol monooleate corresponding to component (B) of claim 1 of the main request in an amount of 0.90% by weight. This corresponds to an amount within the range defined in claim 1 of the main request. The base oil of API category 3 meets the viscosity requirements of claim 1 of the main request (D1: table 1 on page 30) and hence corresponds to component (A) of claim 1 of the main request. Thus, the lubricating oil compositions of D9 differ from those of claim 1 only in that they do not contain a component (C). However, and most importantly, the lubricating oil compositions of D9, subjected to the same test procedure as the compositions of D7, do not suffer from the problem of a lack of emulsion stability. Since the compositions of D9, therefore, are not affected by a lack of emulsion stability, it cannot be assumed that the addition of a component (C) according to claim 1 to these compositions will lead to an increase in emulsion stability. Thus, the addition cannot have the effect invoked by the appellant in support of an inventive step.

It is to be noted in this respect that the additional presence of a base oil of API category 1 in the compositions of D9 does not constitute a further difference from the claimed composition. More specifically, as stated above, the lubricating oil compositions of claim 1 are not limited to those containing only base oils of API categories 2, 3 or 4.

The presence of other base oils, such as those of API category 1, is not excluded by the wording of claim 1.

5.3 It follows that the objective technical problem needs to be formulated in less ambitious terms, namely as the provision of an alternative lubricating oil composition for internal combustion engines.

6. Obviousness

As outlined above, the ranges for the amounts of components (B) and (C) of claim 1 of the main request overlap with the ranges disclosed in D1. As there is no effect associated with the chosen ranges, their selection is arbitrary. The skilled person would thus have worked in the areas of overlap without needing inventive skills. Furthermore, as put forward by the respondent (reply to the statement of grounds of appeal, page 23, paragraph 2) and not contested by the appellant, component (A) of claim 1 merely defines a conventional group of base oils. Consequently, the replacement of the base oil of D1 with a conventional base oil does not require inventive skills either. It follows that the subject-matter of claim 1 does not involve an inventive step.

Therefore, the main request is not allowable. The ground for opposition under Article 100(a) EPC in combination with Article 56 EPC prejudices the maintenance of the patent as granted.

First auxiliary request - admittance

7. During opposition proceedings, the appellant had filed a set of claims of a first auxiliary request with a letter of 16 August 2018. This first auxiliary request

was abandoned in favour of other auxiliary requests filed during the oral proceedings before the opposition division.

The set of claims of the first auxiliary request filed on appeal differs from that of the first auxiliary request filed on 16 August 2018 only in that claim 1 is worded in the two-part form.

Therefore, the appellant, with the first auxiliary request filed on appeal, seeks protection for a subject-matter which is the same as the subject-matter previously abandoned by it during the oral proceedings before the opposition division. Not only was it possible for the first auxiliary request filed on appeal to have been filed before the opposition division, but it actually was filed and later withdrawn before the opposition division. It is thus not to be admitted under Article 12(4) RPBA 2007. Had the board admitted the first auxiliary request filed on appeal, it would have had to decide on the substance of this request, while such a decision was avoided before the opposition division due to the withdrawal of essentially the same request. It is precisely this sort of "forum shopping" between the first and second instances that Article 12(4) RPBA 2007 seeks to avoid.

At the oral proceedings, therefore, the board decided not to admit the first auxiliary request into the proceedings.

#### Second auxiliary request - Amendments

8. Compared to the combination of claim 1 (composition claim) and claim 9 (use of a composition according to

claim 1) as originally filed, claim 1 of the second auxiliary request has been amended as follows:

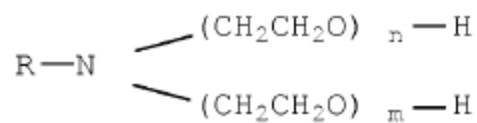
*"Use of a lubricating oil composition for internal combustion engines, in internal combustion engines using fuels with H/C ratios of from 1.93 to 4, internal combustion engines of vehicles fitted with idle-stop equipment, or internal combustion engines using fuels incorporating biofuels or biodiesel, wherein said lubricating oil composition is characterised in that it ~~contains~~ **consists of:***

*(A) at least one base oil selected from the group consisting of base oils of Groups 2, 3 and 4 in the American Petroleum Institute base oil categories with kinematic viscosity of from 3 to 12 mm<sup>2</sup>/s at 100°C and viscosity index of from 100 to 180,*

*(B) a monoglyceride with a hydrocarbon group having from 8 to 22 carbon atoms which is a glycerine fatty acid ester with the fatty acid ester bonded to one of the three hydroxyl groups of the glycerine, wherein the monoglyceride has a hydroxyl value of from 150 to 300 mgKOH/g, and wherein the monoglyceride is present at a level of from 0.3 to 2.0 mass% based on the total mass of the composition,*

*(C) at least one ethylene oxide adduct selected from the group consisting of monoalkyl and monoalkenyl amine ethylene oxide adducts shown by Formula (1) below,*

Formula (1):



(1)



wherein R is a C<sub>14</sub>-C<sub>22</sub> hydrocarbon group, n and m are independently either 1 or 2, wherein the ethylene oxide adduct is present at a level of from 0.4 to 1.5 mass% based on the total mass of the composition, **and (D) additives selected from antioxidants, metal deactivators, anti-wear agents, anti-foaming agents, viscosity improvers, pour point reducers, cleansing dispersants and rust inhibitors.**"

Claim 1 states that the lubricating oil composition consists of components (A), (B), (C) and (D) and that (D) is selected from a specific group of functionally defined additives.

9. As a basis for these amendments, the appellant referred to the following paragraph of the application as originally filed (page 17, lines 3 to 10):

*"Various additives besides the ingredients stated above may be used if necessary and as appropriate in order further to enhance performance. Examples of these include antioxidants, metal deactivators, anti-wear agents, antifoaming agents, viscosity index improvers, pour point reducers, cleansing dispersants, rust inhibitors and so on, and any other known additives for lubricating oils."*

However, this paragraph merely serves to list other possible ingredients/additives by way of example. This follows not only from the fact that it is the very first paragraph under the heading "[o]ther optional ingredients" and that this paragraph states that the additives "*may be used **if necessary and as appropriate***" (emphasis added). It also follows from the fact that the list explicitly mentions some ingredients

(namely those now mentioned in claim 1) but at the same time ends in an indefinite manner with the words "*and any other known additives for lubricating oils*". It cannot be concluded from this - at least not without specific pointers to that effect in the application as originally filed - that a lubricating oil composition consisting of (A), (B), (C) (rather than just comprising (A), (B), (C)) and additives selected from those which are explicitly mentioned in the above paragraph was directly and unambiguously disclosed.

In addition, in the present case the antifoaming agent is added to the lubricating oil composition of the examples in the form of a solution. This necessarily implies the presence of a solvent. However, solvents are not provided for among the additives mentioned in component (D) of claim 1. In fact, the use of the wording "consisting of" in this claim means that they are excluded. The examples given in the application as originally filed, therefore, are actually pointers in a direction different from claim 1.

10. Thus, the subject-matter of claim 1 of the second auxiliary request does not meet the requirements of Article 123(2) EPC. The second auxiliary request is not allowable.

#### Third auxiliary request

11. Claim 1 of the third auxiliary request essentially reads as follows (emphasis added):

*"Use of a lubricating oil composition for internal combustion engines, in internal combustion engines using fuels with H/C ratios of from 1.93 to 4, internal combustion engines of vehicles fitted with*

*idle-stop equipment, or internal combustion engines using fuels incorporating biofuels or biodiesel, **for providing improved emulsion stability in said composition** in accordance with ASTM D7563, wherein said lubricating oil composition is characterised in that it contains: ..."*

The purpose now specified in claim 1 (highlighted in bold above) is not a feature of the claims as granted and is, therefore, open to a clarity assessment under Article 84 EPC (G 3/14, OJ EPO, 2015, A102, order).

12. Under the EPC, the purpose of claims is to enable the protection conferred by a patent to be determined, i.e. to answer the question of what is covered by a claim at issue (CLBA, II.A.1.1). To this end, it is necessary - where, as in the present case, the claim at issue relates to the use of a composition for the improvement of a certain property - to indicate what is to be used for comparison, i.e. with what is the composition used to be compared in relation to the property in question? However, the wording used in the present case, if anything, compares the composition used with itself ("*[u]se of a ... **composition** ... for providing improved emulsion stability **in said composition***", emphasis added). This makes claim 1 inherently unclear, as one and the same composition cannot differ with respect to a given property. Consequently, claim 1 is not clear and the third auxiliary request is not allowable.

#### Fourth auxiliary request

13. As far as the purpose of the use is concerned, claim 1 of the fourth auxiliary request has the same wording as claim 1 of the third auxiliary request ("*Use of a lubricating oil composition ... for providing improved*

*emulsion stability in said composition ...*"). Thus, the reasoning set out above for the third auxiliary request also applies to the fourth auxiliary request. Consequently, the fourth auxiliary request is not allowable either.

## Order

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

The appeal is dismissed.

The Registrar:

The Chairman:



N. Maslin

M. O. Müller

Decision electronically authenticated