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Datasheet for the decision of 2 June 2022

Case Number: T 1164/17 - 3.3.02

Application Number: 09836779.0

Publication Number: 2376614

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Language of the proceedings: EN

Title of invention:

LUBRICATING OIL COMPOSITIONS CONTAINING BORON AND MOLYBDENUM COMPOUNDS

Patent Proprietor:

Chevron Oronite Company LLC

Opponents:

Afton Chemical Corporation
Infineum International Limited

Headword:

Relevant legal provisions:

EPC Art. 56, 83, 123(2)
RPBA Art. 12(4)
RPBA 2020 Art. 25(2)

Keyword:
Late-filed request - submitted with the statement of grounds of appeal
Amendments
Inventive step
Sufficiency of disclosure

Decisions cited:
G 0001/03, T 0435/91, T 0967/09

Catchword:

Europäisches Patentamt
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Beschwerdekammern

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Case Number: T 1164/17 - 3.3.02

D E C I S I O N
of Technical Board of Appeal 3.3.02
of 2 June 2022

Appellant: (Opponent 1)	Afton Chemical Corporation 500 Spring Street Richmond, VA 23219 (US)
Representative:	J A Kemp LLP 80 Turnmill Street London EC1M 5QU (GB)
Appellant: (Opponent 2)	Infineum International Limited P.O. Box 1 Milton Hill Abingdon Oxfordshire OX13 6BB (GB)
Representative:	Hart, Richard Joseph Infineum UK Ltd. Law Department Milton Hill, P.O. Box 1 Abingdon, Oxfordshire OX13 6BB (GB)
Respondent: (Patent Proprietor)	Chevron Oronite Company LLC 6001 Bollinger Canyon Road San Ramon, CA 94583 (US)
Representative:	Haseltine Lake Kempner LLP Redcliff Quay 120 Redcliff Street Bristol BS1 6HU (GB)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 13 March 2017 concerning maintenance of the European Patent No. 2376614 in amended form.**

Composition of the Board:

Chairman	M. O. Müller
Members:	S. Bertrand
	L. Bühler

Summary of Facts and Submissions

I. The appeals lodged by opponents 1 and 2 ("appellant 1" and "appellant 2") are against the opposition division's interlocutory decision that European patent No. 2 376 614 in amended form according to the main request comprising the set of claims filed on 19 January 2016 met the requirements of the EPC.

II. The following documents are referred to in the present decision:

D1	JP2005-306913 A
D1a	English translation of D1
D6	WO 2008/050717 A1
D6a	US 2010/0009882 A1, patent family member of D6
Appendix 1	Data filed by the patent proprietor with the letter of 5 December 2016
A038	Declaration by Dr Michael McLaughlin
A040	J. A. Mc Geehan et al, SAE 1999-01-1525

III. In the impugned decision, the opposition division's conclusions included the following:

- Claim 24 according to the main request fulfilled the requirements of Article 123(2) EPC.

- The invention as defined in claims 23 and 24 of the main request was sufficiently disclosed in the sense of Article 83 EPC.

- The subject-matter of the claims according to the main request involved an inventive step in view of

either of D1 and D6/D6a as the closest prior art (Article 56 EPC).

IV. In its statement setting out the grounds of appeal, appellant 1 submitted, *inter alia*, documents A038 and A040 (denoted D38 and D40 by appellant 1).

V. In its statement setting out the grounds of appeal, appellant 2 submitted that the subject-matter of the claims according to the main request did not involve an inventive step.

VI. In its reply to the grounds of appeal, the patent proprietor ("respondent") provided counter-arguments regarding added subject-matter, sufficiency of disclosure, novelty and inventive step. It submitted, *inter alia*, a set of claims according to auxiliary request 2.

VII. In preparation for the oral proceedings, scheduled at the parties' requests, the board issued a communication pursuant to Article 15(1) RPBA 2020.

VIII. Oral proceedings before the board were held on 2 June 2022 by videoconference.

IX. The parties' relevant requests were as follows:

- Appellants 1 and 2 requested that the decision under appeal be set aside and that the patent be revoked in its entirety.

- The respondent requested that the patent be maintained in amended form according to the set of claims of the main request filed as auxiliary request 2 with the reply to the statements of grounds of appeal.

X. The appellants' case, where relevant to the present decision, can be summarised as follows. For further details, reference is made to the Reasons.

Added subject-matter

- Claim 22 of the main request contravened Article 123(2) EPC.

Inventive step

- The subject-matter of claim 1 of the main request did not involve an inventive step in view of D1 as the closest prior art.

- The subject-matter of claims 1 and 11 of the main request did not involve an inventive step in view of D6/D6a as the closest prior art.

Sufficiency of disclosure

- The invention defined in claims 21 and 22 was not sufficiently disclosed within the meaning of Article 83 EPC.

XI. The respondent's case, where relevant to the present decision, can be summarised as follows. For further details, reference is made to the Reasons.

Admittance of the main request

- The main request was submitted with the reply to the statement of grounds of appeal and was part of the respondent's case. It was to be admitted into the appeal proceedings.

Added subject-matter

- The passage on page 38 of the application as filed referred explicitly to the reduction in injector screw wear and the skilled person would have directly and unambiguously derived that the lubricating oil compositions of the invention were to be used to reduce injector screw wear.

Inventive step

- Considering D1 as the closest prior art, the sulfated ash content and the absence of zinc dithiophosphate represented the distinguishing features of claim 1 of the main request. Starting from the objective technical problem of providing an alternative lubricating oil, no teaching was available in D1 to simultaneously remove the zinc dithiophosphate compounds from and reduce the Mo content of the lubricating oil composition in example 1 of D1.

- Considering example 1 of D6 as the closest prior art, the S:Mo ratio was the distinguishing feature of claims 1 and 11 of the main request from D6/D6a. Based on the results in appendix 1, the objective technical problem was that of providing a lubricating oil composition for improving IASWL. There was no teaching in D6 to modify the S:Mo ratio in example 1 of D6/D6a for improving IASWL.

Sufficiency of disclosure of claims 21 and 22

- A finding of lack of sufficiency was to be based on serious doubts substantiated by verifiable facts. Appellant 1 did not provide any evidence to support its arguments.

Reasons for the Decision

Main request submitted as auxiliary request 2 with the reply to the grounds of appeal

1. Admittance

1.1 The set of claims in auxiliary request 2 was submitted with the reply to the statement of grounds of appeal.

1.2 It differs from the main request held allowable by the opposition division in that claim 1 was further amended to recite that the lubricating oil composition is free of zinc dialkyl dithiophosphate.

1.3 The respondent submitted that the current main request was to be admitted into the appeal proceedings for the following reasons. The main request was submitted with the reply to the statement of grounds of appeal and was part of the respondent's case. Furthermore, claim 1 of the main request was a combination of claims 1 and 10 of the request held allowable by the opposition division in its decision and it could not be surprising for the appellants. Finally, the amendment made in the main request *prima facie* overcame the objection of lack of inventive step based on D1.

1.4 The respondent's submissions were not disputed by the appellants.

1.5 Since the appellants did not establish why the main request could have been presented in the first-instance proceedings, and since the board did not see any reason to the contrary, the main request was admitted into the

proceedings (Article 12(4) RPBA 2007, applicable pursuant to Article 25(2) RPBA 2020).

2. Objections in substance

The appellants stated that they had objections under Articles 56, 83 and 123(2) EPC.

3. Added subject-matter (Article 123(2) EPC)

3.1 Appellant 1 objected that claim 22 of the main request contravened Article 123(2) EPC.

3.2 Claim 22 of the main request relates to the "*Use according to claim 21, wherein said wear is injector screw wear.*"

Claim 21 of the main request, on which claim 22 of the main request is dependent, relates to the "*Use of a lubricating oil composition according to any one of claims 1-19 for inhibiting wear in an internal combustion engine.*"

Claims 1-19, to which claim 21 refers, contain two independent claims, namely claims 1 and 11.

Independent claim 1 of the main request, to which claim 21 of the main request refers, reads: "*A lubricating oil composition having a sulfur content of up to 0.4 wt.% and a sulfated ash content of up to 0.3 wt.% as determined by ASTM D874 and comprising (a) a major amount of an oil of lubricating viscosity; (b) at least one oil-soluble or dispersed oil-stable boron-containing compound having no more than 600 ppm of boron, based upon the total mass of the composition; and (c) at least one oil-soluble or dispersed oil-stable molybdenum-containing compound having no more than 800 ppm of molybdenum, based upon the total mass*

of the composition; wherein the lubricating oil composition has a ratio of sulfur to molybdenum of 20:1 to 100:1, and wherein the lubricating oil composition is free of zinc dialkyl dithiophosphate."

Independent claim 11 of the main request, to which claim 21 of the main request refers, reads: "*A lubricating oil composition having a sulfur content of up to 0.4 wt.% and a sulfated ash content of up to 0.5 wt.% as determined by ASTM D874 and comprising (a) a major amount of an oil of lubricating viscosity; (b) at least one oil-soluble or dispersed oil-stable boron-containing compound having from no more than 600 ppm of boron, based upon the total mass of the composition; and (c) at least one oil-soluble or dispersed oil-stable molybdenum-containing compound having no more than 800 ppm of molybdenum, based upon the total mass of the composition; wherein the lubricating oil composition has a ratio of sulfur to molybdenum of 20:1 to 100:1, and wherein the lubricating oil composition is free of phosphorus.*".

Therefore, claim 22 explicitly and implicitly comprises the following features:

- (1) Use for inhibiting wear.

- (2) Wear is injector screw wear.

- (3) Use in an internal combustion engine.

- (4) A lubricating oil composition having a sulfur content of up to 0.4 wt.% and comprising (a) a major amount of an oil of lubricating viscosity; (b) at least one oil-soluble or dispersed oil-stable boron-containing compound having no more than 600 ppm of boron, based upon the total mass of the composition; and (c) at least one oil-soluble

or dispersed oil-stable molybdenum-containing compound having no more than 800 ppm of molybdenum, based upon the total mass of the composition; wherein the lubricating oil composition has a ratio of sulfur to molybdenum of 20:1 to 100:1.

- (5) The lubricating oil composition being further defined by either (a) having a sulfated ash content of up to 0.3 wt.% as determined by ASTM D874 and being free of zinc dialkyl dithiophosphate (as required by claim 1 of the main request), or (b) having a sulfated ash content of up to 0.5 wt.% as determined by ASTM D874 and being free of phosphorus (as required by claim 11 of the main request).

3.3 Appellant 1 submitted that, in the absence of any pointer, the specific combination of the features "the lubricating oil having a sulfated ash content of up to 0.3 wt.% and being free of zinc dialkyl dithiophosphate" (as required by claim 1 of the main request) or "the lubricating oil having a sulfated ash content of up to 0.5 wt.% and being free of phosphorus" (as required by claim 11 of the main request) with the use for inhibiting injector screw wear in an internal combustion engine (claim 22 of the main request) was not directly and unambiguously disclosed in the application as filed.

3.4 The board does not find appellant 1's submission convincing.

Features (1) to (5) mentioned above are disclosed in the following passages of the application as filed:

Paragraph [0007] of the application as filed refers to "*improved lubricating oil compositions which exhibit improved wear inhibition when used in an internal*

combustion engine" and provides the basis for features (1) and (3).

The last paragraph on page 38 of the application as filed states that "*... the lubricating oil composition of the present invention is capable of providing a surface film on the injector screw that will be sufficient to provide improved wear benefit*" and is a basis for feature (2), "injector screw wear", as defined above.

The combination of claims 1, 8 (ratio of sulfur to molybdenum of 20:1 to 100:1), 11 (a sulfated ash content of up to 0.3 wt.%) and 13 (free of zinc dialkyl dithiophosphate) as filed provides the basis for features (4) and (5)(a) as defined above.

The combination of claims 1, 8 and 12 ("*lubricating oil composition of Claims 1-11, which is substantially free of any phosphorus content*") as originally filed provides a basis for features (4) and (5)(b) as defined above.

Furthermore, the passage on page 38 refers to the composition of the invention, and therefore the skilled person would directly and unambiguously derive therefrom that the teaching of this paragraph (i.e. injector screw wear) applies to the compositions in claims 1-21. It is noted that this paragraph, which implicitly refers to the use of the composition of the invention for inhibiting wear in an internal combustion engine, is a pointer to combine any of the compositions of the invention with the feature "wear is injector screw wear".

In view of the above, the combination of the explicit and implicit features found in claim 22 of the main

request is directly and unambiguously disclosed in the application as originally filed.

3.5 Claim 22 of the main request thus fulfils the requirements of Article 123(2) EPC.

4. Article 56 EPC

4.1 The aim of the patent is to provide a lubricating oil composition which exhibits improved wear inhibition when used in an internal combustion engine (paragraph [0008] of the patent). The lubricating oil composition should have low levels of sulfur, phosphorus and sulfated ash to ensure the durability of after-treatment devices equipped on internal combustion engines to comply with emission regulations (paragraph [0002] of the patent).

4.2 Appellants 1 and 2 objected to the subject-matter of claim 1 of the main request involving an inventive step in view of D1 as the closest prior art and to the subject-matter of claims 1 and 11 of the main request involving an inventive step in view of D6/D6a as the closest prior art.

4.3 Inventive step in view of D1 - claim 1

4.3.1 D1 as the closest prior art

D1 is concerned with providing an engine lubricating oil having low ash, low sulfur and low phosphorus contents for protecting after-treatment devices. This is the same aim as that of the patent. Therefore, D1 is a suitable starting point for the assessment of inventive step of the subject-matter of claim 1 of the main request.

4.3.2 Appellant 1 referred to example 1 of D1 as a starting point. Example 1 of D1 discloses lubricating oil compositions comprising, *inter alia*, an alkali metal borate and a molybdenum compound (antioxidant C, a molybdenum succinic imide complex; see paragraph [0052]). The composition has a sulfated ash content of 0.49 mass%, and a sulfur content of 0.3 mass% (paragraph [0059] of D1).

4.3.3 Distinguishing features

Appellant 1 submitted that example 1 of D1 discloses a content of about 110 ppm Mo, as required by claim 1 of the main request (no more than 600 ppm of Mo). This was not disputed by the respondent. The composition in example 1 of D1 has a sulfur content of 0.3 wt.%, as required by claim 1 of the main request (up to 0.4 wt.%). The S:Mo ratio is thus 3000/110, i.e. 27:1, as equally required by claim 1 of the main request (20:1 to 100:1). This was not disputed by the respondent, either.

The sulfated ash content in example 1 of D1 is 0.49 wt.%, which is above the amount required by claim 1 of the main request (up to 0.3 wt.%). The sulfated ash content is thus the first distinguishing feature of claim 1 of the main request.

The composition in example 1 of D1 also comprises two zinc dithiophosphate compounds ("ZnDTP-1" and "Zn-DTP-2"). These compounds are excluded from the composition in claim 1 of the main request. Therefore, the absence of zinc dithiophosphate is the second distinguishing feature of claim 1 of the main request from example 1 of D1.

4.3.4 Formulation of the objective technical problem

The appellants formulated the objective technical problem as that of providing an alternative lubricating oil. The discussion below starting from D1 as the closest prior art will be based on this objective technical problem.

4.3.5 Obviousness

As submitted by the respondent, D1 teaches that the compositions disclosed in this document should contain two zinc dithiophosphate compounds. Claim 1 of D1 mentions, as a mandatory component, a mixture of 52-98 mol.% of zinc dithiophosphate having secondary alkyl groups and 2-48 mol.% of zinc dithiophosphate having either primary alkyl groups or alkylaryl groups. Zinc dithiophosphate compounds are known antiwear agents and it would not have been obvious to remove said zinc dithiophosphate compounds from the composition in example 1 to provide an alternative composition in view of D1.

Furthermore, even if it were accepted that it was obvious to remove the zinc dithiophosphate compounds, it would have been necessary to reduce the amount of the molybdenum compound, so that the S:Mo ratio remained within the range 20:1 to 100:1 according to claim 1 of the main request. Indeed, if the zinc dithiophosphate compounds in example 1 of D1 were removed, then the content of sulfur ("thio") would be reduced. Since the zinc dithiophosphate compounds in example 1 contributed to about 1500 ppm sulfur, the S:Mo ratio would be about 13:1 and thus would not be in accordance with claim 1 of the main request.

There is, however, no teaching available in D1 to simultaneously remove the zinc dithiophosphate compounds from and reduce the Mo content of the lubricating oil composition in example 1 of D1.

Therefore, the subject-matter of claim 1 of the main request involves an inventive step in view of D1 as the closest prior art.

4.4 Inventive step in view of D6/D6a - claim 11

4.4.1 D6/D6a as the closest prior art

D6/D6a relates to a lubricating oil composition having low ash, low sulfur and low phosphorus contents for protecting after-treatment devices and maintaining wear resistance (paragraphs [0001], [0005] and [0015] of D6a). This represents the same aim as that of the patent. Therefore, D6/D6a is a suitable starting point for the assessment of inventive step of the subject-matter of claims 1 and 11 of the main request.

4.4.2 Example 1 of D6/D6a (third column of table 1) discloses a phosphorus-free lubricating oil composition comprising, *inter alia*, a disulfide, a boronated succinimide providing 400 ppm B to the composition and an Mo-based antioxidant providing 100 ppm Mo to the composition, as required by claim 11 of the main request. The sulfur content is 0.15 wt.%, as required by claim 11 of the main request (up to 0.4 wt.%). The composition in example 1 has a sulfated ash content (0.43 wt.%) as required by claim 11 of the main request (up to 0.5 wt.%). The S:Mo ratio in example 1 is 15:1. This falls outside the range required by claim 11 (20:1 to 100:1).

4.4.3 Distinguishing features

As set out above, the S:Mo ratio represents the distinguishing feature of claim 11 of the main request from D6/D6a.

4.4.4 Formulation of the objective technical problem

For the definition of the objective technical problem, the respondent relied on appendix 1.

In appendix 1, example 1 of the patent, according to claim 11 of the main request, and comparative example D were evaluated for their valve train wear performance by measuring the injector adjusting screw weight loss (IASWL).

Comparative example D differs from example 1 of the patent on account of the molybdenum content (270 ppm vs. 90 ppm Mo) and the S:Mo ratio (8.5:1 (comparative example D, outside the scope of claim 11 of the main request) vs. 25.5:1 (example 1), falling within the scope of claim 11 of the main request).

Comparative example D has an IASWL of 33.4. Example 1 of the patent has an IASWL of 7.1. A lower IASWL value means higher valve train wear performance.

Therefore, appendix 1 shows that wear is reduced for an injector adjusting screw of a valve train for the composition in example 1 of the patent having, *inter alia*, an S:Mo ratio within the claimed range, relative to the composition in comparative example 1, which has an S:Mo ratio outside the claimed range.

The objective technical problem may be considered that of providing a lubricating oil composition for improving IASWL.

4.4.5 Appellants 1 and 2 disputed the objective technical problem and submitted that the objective technical problem was merely that of providing an alternative lubricating oil. According to appellant 1, the base oil and the amount of the dispersant viscosity index improver found in the composition in comparative example D were further differences from the composition in example 1 of the patent. In view of these further differences, it was wrong to deduce that the improvement in IASWL in appendix 1 had its origin in the S:Mo ratio. A040 (last paragraph) emphasised the importance of selecting viscosity index improvers for reducing soot wear in low-emissions diesel engines.

The board acknowledges that the base oil in comparative example D (47 wt.% of a Group II base oil and 53 wt.% of a Group III base oil) differs from the base oil in example 1 of the patent (44 wt.% of a Group II base oil and 56 wt.% of a Group III base oil). The board also acknowledges that the amount of the dispersant viscosity index improver in the composition in comparative example D (4 wt.%) is different from the amount in the composition in example 1 of the patent (4.5 wt.%). However, as submitted by the respondent, the viscosity is essential when comparing wear performance. Therefore, in order to obtain a meaningful result as regards the effect of the S:Mo ratio on wear performance, two lubricating oil compositions differing in terms of the S:Mo ratio should be compared with these two compositions having the same viscosity or the same viscosity grade (SAE 15W40 for comparative example D and example 1 of the patent). Adapting the amount of the dispersant viscosity index improver and the composition of the base oil are means for adjusting the viscosity of the whole lubricating oil composition. Hence, the fact that example 1 and comparative example

D differ in terms of the amount of the dispersant viscosity index improver and the composition of the base oil does not invalidate the finding as regards the effect of the S:Mo ratio.

The passages referred to by the appellants in A040, point 12 on page 18 teach that soot dispersancy (and soot wear) was controlled "*by proper selection of ashless dispersant, V.I. improver and base oil type*". This passage does not refer to any dispersant viscosity index improver as used in comparative example D and example 1 of the patent, let alone to an amount of it. Therefore, the appellant's submission regarding A040 does not change the conclusion on the effect of the S:Mo ratio.

Furthermore, no evidence was provided by the appellants that the results provided in appendix 1 for IASWL depended on the composition of the base oil and the amount of the dispersant viscosity index improver. In the absence of any such evidence, the appellants' submissions in that regard must fail.

The appellants further submitted that not all the lubricating oil compositions covered by the claims would exhibit the same effect as example 1 of the patent. Claim 1 of the main request covered any boron and molybdenum compound. Furthermore, the patent (paragraph [0074]) taught that the amount of sulfur in the lubricating oil was preferably derived from active sulfur compounds, i.e. an antiwear active sulfur compound. The presence of such an antiwear active sulfur compound as a sulfur source in the claimed composition was thus essential to the invention. Claim 1, however, covered embodiments without such an active sulfur compound. Finally, claim 11 of the main request covered embodiments with 1 ppm of each ingredient. It

was thus not credible that the effect achieved by example 1 of the patent would be obtained by an oil composition comprising 1 ppm of each ingredient.

The board does not share the appellants' view. As submitted by the respondent, in the absence of technical evidence that the effect achieved by example 1 of the patent would not be obtained by any boron, molybdenum or sulfur compound, or at any amount of these compounds, the appellants' allegation is not convincing. Paragraph [0074] of the patent, when referring to active sulfur compounds, discloses only an embodiment of the invention. It is not stated in that paragraph that the presence of an antiwear active sulfur compound as a sulfur source in the claimed composition is essential to the invention.

The appellants finally submitted that the two additional examples in appellant 2's statement of grounds of appeal demonstrated that the S:Mo ratio was not determinative of wear protection.

The board disagrees with the appellants. The two additional examples in appellant 2's statement of grounds of appeal (point 5.2) are two oil formulations having almost the same S:Mo ratio (44 vs. 43) and essentially differing from each other in the sulfur content (0.21 wt.% and 0.28 wt.%) and in the molybdenum content (48 ppm and 65 ppm). The first oil formulation (0.21 wt.% S and 48 ppm Mo) has an IASWL of 14.5. The second formulation (0.28 wt.% S and 65 ppm Mo) has an IASWL of 31.8, i.e. an IASWL value that is higher than the first formulation, even if both formulations have the same S:Mo ratio. However, as submitted by the respondent, neither composition is in accordance with claim 11 of the main request, since the sulfated ash is 0.9 wt.% in both compositions, while it is limited to

0.5 wt.% in claim 11 of the main request. Therefore, these two compositions are not within the scope of claim 11 of the main request, and they therefore do not constitute a fair comparison to demonstrate that the effect does not have its origin in the S:Mo ratio.

4.4.6 Obviousness

The appellants based their argument on the objective technical problem of providing an alternative lubricating oil composition.

However, as set out above, the objective technical problem is not that of providing an alternative lubricating oil composition, but that of providing a lubricating oil composition for improving IASWL.

There is no teaching available in D6/D6a or in D1 as to how to improve IASWL, let alone teaching in that respect to modify the S:Mo ratio in example 1 of D6/D6a to fall within the range defined in claim 11 of the main request.

Therefore, the subject-matter of claim 11 of the main request involves an inventive step in view of D6/D6a as the closest prior art.

4.5 Inventive step in view of D6/D6a - claim 1

Since claim 1 of the main request has at least the same distinguishing feature from D6/D6a as claim 11 of the main request, the same reasoning as that given for claim 11 of the main request applies.

4.6 Therefore, the subject-matter of claim 1, and, by the same token, claims 2-10 and 12-22 of the main request, involves an inventive step in view of D6/D6a as the closest prior art.

5. Sufficiency of disclosure - main request

6. Appellant 1 objected to the sufficiency of disclosure of claims 21 and 22 of the main request.

6.1 Independent claim 21 of the main request is directed to the use of a lubricating oil composition as defined in any of the earlier product claims for inhibiting wear in an internal combustion engine. Dependent claim 22 of the main request further defines the wear as injector screw wear.

6.2 Appellant 1 argued that, in the absence of any evidence to demonstrate that any of the features in claim 1 and/or 11 were associated with beneficial wear properties, claims 21 and 22 encompassed non-working embodiments and this gave rise to issues with sufficiency in line with the approach set out in G 1/03. As with the patent at issue in T 435/91, the opposed patent thus just provided an invitation to perform a research programme in order to identify any useful products suitable for the lubricating oil composition, so that wear was inhibited. The invention according to claim 21 or 22 therefore was not sufficiently disclosed.

Appellant 1 also argued that, as discussed in A038 (points 7-18), there were no details of the modified "Cummins CJ-4 ISM test" used in the examples and it was impossible to verify whether a given fluid provided the desired effect.

6.3 Concerning appellant 1's argument, as submitted by the respondent, a finding of lack of sufficiency presupposes that there are serious doubts substantiated by verifiable facts. Appellant 1 did not provide any data points for any particular composition falling

within the scope of claim 21 or claim 22 to support its arguments.

Each party bears the burden of proof of the facts it alleges and it is established jurisprudence that a successful objection of lack of sufficiency presupposes that there are serious doubts substantiated by verifiable facts (T 967/09). In the absence of data demonstrating that the skilled person would be faced with an undue burden when trying to repeat the invention underlying claim 21 or 22, and to obtain inhibition of injector screw wear, appellant 1's objection is not convincing.

With regard to the allegation that there were no details of the modified "Cummins CJ-4 IM test" used in the examples, paragraph [0144] of the application as filed refers to a Cummins CJ-4 test performed for a duration of 100 hours in a Cummins ISM engine equipped with an EGR. Therefore, the application as filed teaches the skilled person how to carry out the test.

This conclusion was already drawn in the board's communication under Article 15(1) RPBA 2020. The appellants did not contest this conclusion.

For these reasons, the board concluded that claims 21 and 22 of the main request met the requirements of Article 83 EPC.

7. The set of claims in the main request is allowable.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the opposition division with the order to maintain the patent with the following claims and a description to be adapted to them:

   Claims 1 to 22 of the main request filed as auxiliary request 2 with the reply to the statements of grounds of appeal.

The Registrar: The Chairman:

N. Maslin M. O. Müller

Decision electronically authenticated