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**Datasheet for the decision
of 9 October 2012**

Case Number: T 2188/08 - 3.3.01
Application Number: 02076993.1
Publication Number: 1266955
IPC: C10M 69/04, C10M 111/02
Language of the proceedings: EN

Title of invention:
Lubricating oil compositions

Applicant:
Infineum International Limited

Opponent:

-

Headword:
Crankcase lubricant/INFINEUM

Relevant legal provisions:
EPC Art. 56, 111(1)
EPC R. 42(1)

Relevant legal provisions (EPC 1973):

-

Keyword:
"Novelty and inventive step (yes) - non-obvious solution"

Decisions cited:
T 0012/81, T 0332/87

Catchword:

-



Case Number: T 2188/08 - 3.3.01

D E C I S I O N
of the Technical Board of Appeal 3.3.01
of 9 October 2012

Appellant: Infineum International Limited
(Applicant) P.O. Box 1
Milton Hill
Abingdon
Oxfordshire OX13 6BB (GB)

Representative: Mansell, Keith Rodney
Infineum UK Ltd.
Law Department
P.O. Box 1
Milton Hill
Abingdon
Oxfordshire OX13 6BB (GB)

Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 30 May 2008
refusing European patent application
No. 02076993.1 pursuant to Article 97(2) EPC.

Composition of the Board:

Chairman: P. Ranguis
Members: C. M. Radke
C.-P. Brandt

Summary of Facts and Submissions

- I. The applicant for European patent application No. 02 076 993.1 appealed against the decision of the Examining Division to reject said application.
- II. The decision of the Examining division was based on the claims of
- the main request submitted with letter of 28 February 2008;
 - the first auxiliary request, submitted as the fourth auxiliary request with letter of 28 February 2008;
 - the second auxiliary request submitted during the oral proceedings of 1 April 2008.
- III. The documents cited during examination included the following:
- (D3) EP-A-0 931 827.
- IV. Claim 1 of the main request read as follows:
- "1. A crankcase lubricating oil composition comprising, or made by admixing, a major amount of:
- (A) a basestock of lubricating viscosity comprising a Group III basestock, in a major amount, and a Group V basestock, in the form of a polyol ester, in a minor amount; and minor amounts of lubricant additive components comprising
 - (B) a dispersant, such as an ashless dispersant;
 - (C) a metal detergent;
 - (D) one or more other lubricant additive components

selected from anti-oxidants, anti-wear agent and friction modifiers; and
(E) a viscosity modifier."

V. The examining division decided that the subject-matter of the claims of the main request and of auxiliary requests 1 and 2 lacked inventive step in view of document (D3).

In particular, it considered it to be obvious from document (D3) which teaches a lubricating oil composition comprising a base stock comprising
(1) an ester and
(2) a polyolefin or a highly refined mineral oil to select the well-known Group III base stock as the highly refined mineral oil or to replace the polyolefin by such a base stock.

The claims of the second auxiliary request were directed to the use of the base stock to improve piston cleanliness. The subject-matter of these claims was not based on an inventive step as the claimed improvement had not been demonstrated.

VI. With the formal letter dated 8 December 2011, the Board summoned the appellant to oral proceedings. In the communication annexed to the summons, the Board cited the following additional documents:

(D5) WO-A-99/18 175

(D6) Leaflet "Shell XHVI 8.2, "15/11/2004", retrieved from the internet on 23 November 2011 under http://www.epc.shell.com/Docs/GPCDOC_GTDS_XHVI_8.2.pdf.

In this communication, the Board gave reasons for its preliminary opinion that the claims were not clear, that the subject-matter of the claims of the main request and of the first, third and fourth auxiliary requests then on file lacked novelty in view of document (D5), and that the subject-matter of the claims of the second auxiliary request was not inventive in view of said document.

VII. Under cover of the response dated 30 July 2012, the appellant filed amended claims and submitted comparative tests; with the one dated 17 August 2012 it provided additional test data. With the communication dated 31 August 2012, the Board informed the appellant that the oral proceedings were cancelled.

VIII. The present decision is based on claims 1 to 6 of the main request filed with the letter dated 30 July 2012. The independent claims are claims 1, 4, 5 and 6. They read as follows:

"1. A crankcase lubricating oil composition comprising, or made by admixing, a major amount of, providing in excess of 50 mass% of the composition, of:

(A) a basestock of lubricating viscosity consisting essentially of
a Group III basestock and a Group V basestock, as both defined in American Petroleum Institute 1509 "Engine oil Licensing and Certification System" Fourteenth Edition, December 1996, the group V basestock being in the form of a polyol ester, the

polyol ester being present in an amount of 1 to 8 mass %, based on the total mass of the basestock; and minor amounts of lubricant additive components, providing less than 50 mass% of the composition, comprising

- (B) a dispersant, such as an ashless dispersant;
- (C) a metal detergent;
- (D) one or more other lubricant additive components selected from anti-oxidants, anti-wear agent and friction modifiers; and
- (E) a viscosity modifier."

"4. A method of lubricating a compression-ignited internal combustion engine comprising operating the engine and lubricating the engine with a lubricating oil composition as claimed in any of claims 1 to 3."

"5. A method of reducing the ring-sticking tendencies and improving piston cleanliness of a compression-ignited internal combustion engine comprising adding to the engine a lubricating oil composition as claimed in any of claims 1 to 3."

"6. The use of a lubricating oil composition as claimed in any one of claims 1 to 3 to reduce the ring-sticking tendencies and to improve the piston cleanliness of a compression-ignited internal combustion engine."

IX. The arguments of the appellant, as far as relevant for the present decision, may be summarised as follows:

The claims of the amended main request were limited in scope with respect to those of the previous second

auxiliary request for which the Board had acknowledged novelty.

Document (D5) represented the closest prior art. This document did not disclose a composition containing 1 to 8 mass % of polyol ester in the basestock. The comparative tests showed that a basestock containing 1 to 8 mass % of polyol ester gave rise to less deposit than one containing no or more than 8 mass % of polyol ester. The problem solved was to provide a basestock which caused less piston deposits or ring sticking. There was no indication in document (D5) that this problem could be solved at such low treat rates of polyol ester.

- X. The appellant requested that the decision under appeal be set aside and that the application be allowed to proceed to grant on the basis of the claims of the main request filed with the letter dated 30 July 2012.

Reasons for the Decision

1. The appeal is admissible.

2. Article 123(2) EPC

Present claim 1 is based on original claims 1 to 3, page 3, lines 22-25, page 5, lines 20-22 and page 6, lines 14-18 of the application as originally filed. Claim 2 is based on page 6, lines 16-18, and claim 3 on page 7, lines 7-8 of the application as filed. Claims 4 to 6 correspond to original claims 4, 5 and 7.

Hence, the amended claims satisfy the requirements of Article 123(2) EPC.

3. Clarity of the claims

The objections of the Board were based on the fact that

- the Group III and Group V basestocks were not defined in the claims, and that
- the expression "a major amount" was unclear in the context of the claims which allowed for the presence of more than two components.

The appellant has overcome these objections by inserting into claim 1

- a reference to the book defining the different groups of basestocks, as disclosed on page 5, line 20, to page 6, line 8 of the application as filed,
- the definitions of "major amount" and "minor amount" disclosed on page 3, lines 22-25 of the application as filed, and
- the limitation that the basestock consists

essentially of a Group III basestock and 1 to 8 mass % of a polyol ester Group V basestock.

For these reasons, the Board considers the claims to be clear.

4. Novelty

4.1 Document (D5) relates to crankcase lubricant compositions for diesel engines (see page 1, lines 1-4).

These compositions contain

- an ester, preferably in an amount of 5 to 50 % by weight, more preferably 10 to 40 % by weight of the composition, and
- an API Group III basestock (see claims 1, 13 and 30).

Preferred esters are those of a polyhydric alcohol with a monocarboxylic acid (see claim 4).

4.2 According to the table on page 19, the composition used in the examples contains

- 44.6 % by weight of an API Group III basestock (i.e. Shell XHVI, see page 7, lines 16-18);
- 20 % by weight of a trimethylolpropane ester of C₈ to C₁₀ alkanolic acids
- a hydrogenated styrene/isoprene copolymer as a viscosity modifier (component **(E)** according to present claim 1);
- Irganox L135 as an antioxidant and an amine as a friction modifier (components **(D)** according to present claim 1);

and, according to footnote (5) of that table

- a dispersant and a metal detergent (components **(B)** and **(C)** according to present claim 1).

The lubricant composition meets the Mercedes Benz Page 228.5 specification requirement for ring sticking and engine and piston cleanliness (see the penultimate line on page 20).

Document (D6) shows that "Shell XHVI" is in fact an API Group III basestock (see document (D6), the first two sentences).

- 4.3 According to the established jurisprudence of the boards of appeal, the disclosure of a cited document is not confined to the information given in the examples (see e.g. T 12/81, OJ EPO 1982, 296, point 7 of the reasons).

"This means that, when examining novelty, different passages of one document may be combined provided that there are no reasons which would prevent a skilled person from such a combination. In general the technical teaching of examples may be combined with that disclosed elsewhere in the same document, e.g. in the description of a patent document, provided that the example concerned is indeed representative for the general technical teaching disclosed in the respective document" (T 332/87 of 23 November 1990, point 2.2 of the reasons).

The composition listed under point 4.2 above was used in the only examples of document (D5) and thus is deemed to be representative for said document. In this composition

44.6 % by weight of an API Group III basestock
20 % by weight of a trimethylolpropane ester of
C₈ to C₁₀ alkanolic acids (i.e. of a polyol ester)
form the basestock. Consequently, the polyolester is
present in a concentration of $20/64.6 = 31$ mass % **based
on the total mass of the basestock.**

According to claim 13 of document (D5), it is preferred
that the ester be present in a concentration of 5 to
50 % **based on the total weight of the composition.**

Hence, the disclosure of document (D5) comprises the
examples modified by setting the **concentration of the
polyol ester** as low as 5 % by weight of the
composition, i.e. to $5/(5+44.6) = 10$ mass % **based on
the total mass of the basestock.**

4.4 The subject-matter of the claims of the present main
request is limited to polyol ester concentrations of
1 to 8 mass% based on the total mass of the basestock,
and thus differs from the disclosure in document (D5).

It also differs from disclosure of document (D3) which
does not describe a composition containing a Group III
basestock (see point V above). Nor do any of the other
cited prior-art documents disclose the subject-matter
of the present claims.

Hence, the subject-matter of the present claims is
novel.

5. Inventive step

5.1 The closest prior art

The closest state of the art is normally a prior-art document disclosing subject-matter with the same objectives as the claimed invention and having the most relevant technical features in common.

The objective of the present application was to provide a lubricating oil composition that gives enhanced performance in diesel engine piston cleanliness and piston ring-sticking (see page 1, lines 1-3 of the application as filed).

The examining division considered document (D3) as the closest prior art (see point 4 of the reasons of the decision under appeal).

Like the appellant, the Board rather considers document (D5) as the closest prior art, as this document - in contrast to (D3) -

- refers to diesel engines (see the first paragraph on page 1);
- addresses the problem of engine piston cleanliness and ring-sticking (see the table at the bottom of page 20); and
- suggests the use of Group III base oils in order to meet these objectives.

5.2 The problem to be solved

The appellant has provided comparative tests under cover of its letter dated 30 July 2012. The following table from page 2 of said letter summarises the data obtained in a K50190 panel coker test:

	Oil A	Oil B	Oil C
Group III Oil	82.3	74.3	67.3
Ester	0	8	15
Viscosity Modifier	3.9	3.9	3.9
Additive Package	13.8	13.8	13.8
Ester as % of base stock	0	9.7	18.2
Deposits	0.088	0.010	0.038

These data show that the coke deposits are minimised when polyol esters are used in amounts of more than 0 and less than 18 % by mass of the basestock. For this reason, the subject-matter of the present claims, which require that the polyol ester concentration be kept within the range of from 1 to 8 % by mass, solves the problem of minimising piston deposits.

5.3 The solution

According to document (D5), the polyol ester serves to "retain particulate combustion products, especially soot, in suspension" (see the bottom paragraph on page 4). However, this gives no indication to the person skilled in the art to keep its concentration well below the level given in the examples of (D5) when seeking to minimise piston deposits.

Hence, document (D5) as such cannot render the subject-matter of the present claims obvious. Nor is the Board aware of a cited prior-art document which taught the person skilled in the art to keep the concentration of the polyolester at such a low level when trying to minimise piston deposits.

Therefore, the subject-matter of the present claims is based on an inventive step.

6. As no other objection was raised by the Examining Division and as the Board is not aware of any other deficiencies in the claims, it concludes that the claims meet the requirements of the EPC.

7. Remittal

The present claims have been amended. Now that the Board has decided on these claims, the description has to be amended accordingly (Rule 42(1)(c) EPC).

According to Rule 42(1)(b) EPC, this also requires that the closest prior art, namely document (D5), be cited in the description and that its relevant disclosure be summarised briefly therein.

Under Article 111(1) EPC, "The Board of Appeal may either exercise any power within the competence of the department which was responsible for the decision appealed or remit the case to that department for further prosecution".

In the present case, the Board exercises its discretion under Article 111(1) EPC by remitting the case to the Examining Division for adaptation of the description.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the department of the first instance with the order to grant a patent with the following claims and a description to be adapted:

Claims 1 to 6 of the main request filed with the letter dated 30 July 2012.

The Registrar:

The Chairman:

M. Schalow

P. Ranguis