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**EUROPEAN PATENT APPLICATION**

②¹ Application number: **83304628.7**

⑤¹ Int. Cl.⁴: **C 10 M 1/38, C 10 M 3/32**

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**Bulletin 84/18**

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⑧⁴ Designated Contracting States: **AT BE CH DE FR GB IT LI LU NL SE**

⑧⁸ Date of deferred publication of search report: **07.08.85 Bulletin 85/32**

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⑤⁴ **Sulfur containing lubricating compositions.**

⑤⁷ New lubricating compositions comprising a major amount of (A) a hydrorefined lubricating oil, and a minor amount, by weight, of the combination of; (B) at least one aliphatic olefinic compound and (C) the sulfurization product of at least one aliphatic aryl aliphatic or alicyclic olefinic hydrocarbon containing from about 3 to 30 carbon atoms. Preferably (B) is a fatty acid or fatty acid ester containing olefinic unsaturation in the acid moiety, and the weight ratio of component B to component C is no greater than 1:1.

**EP 0 107 282 A3**



| DOCUMENTS CONSIDERED TO BE RELEVANT                                                                                                                                                                                     |                                                                                                             |                                                                                                                                                                                                                                                                              |                                                            |
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| Category                                                                                                                                                                                                                | Citation of document with indication, where appropriate, of relevant passages                               | Relevant to claim                                                                                                                                                                                                                                                            | CLASSIFICATION OF THE APPLICATION (Int. Cl. <sup>3</sup> ) |
| X                                                                                                                                                                                                                       | US-A-2 851 422 (A. MANTEUFFEL)<br><br>* Claims 5-12; column 9, line 20 - column 10, line 67 *               | 1,2,6, 8-10, 16                                                                                                                                                                                                                                                              | C 10 M 1/38<br>C 10 M 3/32                                 |
| X                                                                                                                                                                                                                       | US-A-2 830 956 (J.I. WASSON)<br><br>* Column 3, line 43 - column 4, line 47; columns 7-12 *                 | 1-4,6, 8-10, 16                                                                                                                                                                                                                                                              |                                                            |
| X                                                                                                                                                                                                                       | US-A-3 267 033 (J.W. ALLEN)<br><br>* Claims 1-12; column 1, line 65 - column 2, line 5; column 7, line 38 * | 1,2,4, 6-10, 16                                                                                                                                                                                                                                                              |                                                            |
|                                                                                                                                                                                                                         |                                                                                                             |                                                                                                                                                                                                                                                                              | TECHNICAL FIELDS SEARCHED (Int. Cl. <sup>3</sup> )         |
| X                                                                                                                                                                                                                       | US-A-3 966 623 (R.H. KRUG)<br><br>* Column 4, table 1 *                                                     | 1-4,8- 11,16                                                                                                                                                                                                                                                                 | C 10 M<br>C 07 C                                           |
| X                                                                                                                                                                                                                       | US-A-3 574 101 (J.P. MURPHY)<br><br>* Claim 1; column 14, lines 9-16; example D *                           | 1-4,8- 10,16                                                                                                                                                                                                                                                                 |                                                            |
| X                                                                                                                                                                                                                       | US-A-2 203 507 (T.G. ROEHNER)<br><br>* Claims 1,3-7 *                                                       | 1-4,8- 10,16                                                                                                                                                                                                                                                                 |                                                            |
| The present search report has been drawn up for all claims                                                                                                                                                              |                                                                                                             |                                                                                                                                                                                                                                                                              |                                                            |
| Place of search<br>THE HAGUE                                                                                                                                                                                            |                                                                                                             | Date of completion of the search<br>03-04-1985                                                                                                                                                                                                                               | Examiner<br>RO TSAERT L.D.C.                               |
| CATEGORY OF CITED DOCUMENTS                                                                                                                                                                                             |                                                                                                             | T : theory or principle underlying the invention<br>E : earlier patent document, but published on, or after the filing date<br>D : document cited in the application<br>L : document cited for other reasons<br>& : member of the same patent family, corresponding document |                                                            |
| X : particularly relevant if taken alone<br>Y : particularly relevant if combined with another document of the same category<br>A : technological background<br>O : non-written disclosure<br>P : intermediate document |                                                                                                             |                                                                                                                                                                                                                                                                              |                                                            |





| DOCUMENTS CONSIDERED TO BE RELEVANT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                        |                                                | Page 2                                                     |
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| Category                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Citation of document with indication, where appropriate, of relevant passages                                                                          | Relevant to claim                              | CLASSIFICATION OF THE APPLICATION (Int. Cl. <sup>3</sup> ) |
| D,A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | US-A-4 191 659 (K.E. DAVIS)<br><br>* Claims 1-45 *                                                                                                     | 1,10-<br>13,16                                 |                                                            |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ---<br>US-A-4 240 958 (M. BRAID)<br><br>* Claims 1-11 *                                                                                                | 1,14-<br>16                                    |                                                            |
| P,X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ---<br>EP-A-0 077 139 (ATLANTIC RICHFIELD)<br>* Claims 1-3,12-15; page 6, line 20 - page 7, line 10; page 9, line 25 - page 12, line 19 *<br><br>----- | 1-5,8-<br>11,16                                |                                                            |
| The present search report has been drawn up for all claims                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                        |                                                | TECHNICAL FIELDS SEARCHED (Int. Cl. <sup>3</sup> )         |
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| <p><b>CATEGORY OF CITED DOCUMENTS</b></p> <p>X : particularly relevant if taken alone<br/> Y : particularly relevant if combined with another document of the same category<br/> A : technological background<br/> O : non-written disclosure<br/> P : intermediate document</p> <p>T : theory or principle underlying the invention<br/> E : earlier patent document, but published on, or after the filing date<br/> D : document cited in the application<br/> L : document cited for other reasons<br/> &amp; : member of the same patent family, corresponding document</p> |                                                                                                                                                        |                                                |                                                            |