

12

EUROPEAN PATENT APPLICATION

21 Application number: **89306420.4**

22 Date of filing: **23.06.89**

51 Int. Cl.4: **C 10 M 163/00**

C 10 M 141/10, C 10 M 141/12
/(C10M163/00,133:08,135:24,
137:02,159:12,159:12),
(C10M141/10,133:08,133:52,
133:52,135:24,137:02),
(C10M141/12,133:08,135:24,
137:02,139:00),C10N30:06,
C10N40:04,C10N60:12

30 Priority: **24.06.88 US 211428**

43 Date of publication of application:
27.12.89 Bulletin 89/52

84 Designated Contracting States: **DE FR GB**

88 Date of deferred publication of search report:
14.02.90 Bulletin 90/07

71 Applicant: **EXXON CHEMICAL PATENTS INC.**
200 Park Avenue
Florham Park New Jersey 07932 (US)

72 Inventor: **Ryer, Jack**
61 Jensen Street
East Brunswick New Jersey 08816 (US)

Watts, Raymond Frederick
7 Oxford Lane Long Valeey
New Jersey 07853 (US)

74 Representative: **Bawden, Peter Charles et al**
EXXON CHEMICAL LIMITED EXXON CHEMICAL
TECHNOLOGY CENTRE PO Box 1
Abingdon Oxfordshire OX13 6BB (GB)

54 **Synergistic combination of additives useful in power transmitting compositions.**

57 A mutually compatible combination of additives and their use to impart anti-wear, dispersancy and friction modification to power transmission compositions, particularly automatic transmission fluids, is disclosed. The additives comprise organic phosphite ester such as diolel monohydrogenphosphite; hydroxyl amine compound, such N-octadecyl diethanolamine, N-octadecyloxypropyldiethanol amine, or N-octadecylthiopropyl diethanolmine, and dispersant such as that derived by reacting a polyisobutenyl succinimide with a phosphosulfurized terpene, either alone or in combination with a borated, aminated dispersant such as that derived by reacting a polyisobutenyl succinimide with boric acid.



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
D,A	US-A-3 484 375 (SHIH-EN HU) * Column 2, lines 21-62; column 3, lines 12-50; column 5, lines 15-17; column 6, lines 39-75; claims 1,3,7 *	1,7,10, 11,13- 15,17, 20,24, 26-28, 31	C 10 M 163/00 C 10 M 141/10 C 10 M 141/12 // (C 10 M 163/00 C 10 M 133:08 C 10 M 135:34 C 10 M 137:02 C 10 M 159:12 C 10 M 159:12) (C 10 M 141/10 C 10 M 133:08 C 10 M 133:52 C 10 M 133:52 C 10 M 135:24 C 10 M 137:02) (C 10 M 141/12 C 10 M 133:08 -/-
D,A	US-A-4 129 508 (E.J. FRIIHAUF) * Column 2, lines 18-52; column 5, lines 1-40; column 10, line 53 - column 11, line 2; column 12, example A - lines 35-50 *	1-6,9, 17-19, 21,23, 28-32	
A	DE-A-1 906 038 (CHEMISCHE WERKE HÜLS AG) * Pages 1,2; pages 5,6 *	1-4,9, 17-19, 23,28, 31	
A	EP-A-0 113 199 (EXXON RESEARCH AND ENGINEERING CO.) * Page 1, lines 1-10; page 2, line 11 - page 3, line 9; page 3, line 36 - page 5, line 17; page 6, lines 1-10 *	1,7,10, 17,20, 28,31	TECHNICAL FIELDS SEARCHED (Int. Cl.4)
A	FR-A-1 511 554 (STANDARD OIL CO.) * Page 1, column 1, line 21 - column 2, line 4; page 2, column 2, lines 9-35; page 4, column 1, line 54 - column 2, line 34; page 8, column 1, lines 1-51; claims *	1,11,13 -15,17, 24,26- 28,31	C 10 M
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 24-10-1989	Examiner HILGENGA K.J.
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
			C 10 M 135:24 C 10 M 137:02 C 10 M 139:00) C 10 N 30:06 C 10 N 40:04 C 10 N 60:12 C 10 N 60:14
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 24-10-1989	Examiner HILGENGA K.J.
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			