Monsanto

FROM (NAME & LOCATION): L. R. Stark - Research Center

DATE: August 18, 1970

cc: W. R. Richard
H. S. Bergen HBERG
D. A. Hall/DFS/DRP DHALL
P. F. Heimsch/PDF

SUBJECT: AUTO TRANSMISSION SEAL SWELL AGENTS

REFERENCE: LRS to NTJ, 6/16/70

TO: N. T. Johnson - NJOHN

A potential objection to Aroclor 1221 previously recommended as an Aroclor 1242 substitute for the subject application is volatility. We have completed additional seal swell tests using Santicizer 144. The attached results indicate Santicizer 144 and a mixture with 1221 to have slightly higher swelling tendencies than 1242 or 1221. However, the Santicizer should be considered as an alternate.

Again we ask that when Wynn and Radiator Specialties are contacted on this subject, they be asked what other functional properties are important in this application.

L. R. Stark

ms
Atts. 2

DSW 200164

STLCOPCB4058228

SEAL SWELL SANTICIZER 144 AND AROCLOR 1221 IN TYPE F ATF FLUID*

		SWELL, VOL % and DUROMETER INITIAL/DUROMETER FINAL			
		NEOPRENE		BUNA N	
		150F**	180F	150F	180F
SANTICIZER 144	0% WT	15.5% 72/65	20.3% 72/64	0.8% 68/68	1.9% 67/68
	2%	20.5 73/64	25.7 73/60	3.8 67/66	4.8 67/66
	5%	26.3 73/61	31.3 73/57	7.7 66/63	8.5 67/64
50% wt. SANT. 144	0%	15.5 72/65	20.3 72/64	0.8 68/68	1.9 67/68
50% AROCLOR 1221	2%	18.9 72/63	23.5 73/61	3.0 68/66	4.3 67/66
	5%	24.2 73/62	28.5 73/57	6.2 66/64	6.6 68/65

* AMOCO ATF FLUID

** 168 hr. Exposure time

DSW 200165

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SEAL SWELL AROCLOR 1242

AND AROCLOR 1221 IN TYPE F ATF FLUID*

ADDITIVE		Swell Vol. % NEOPRENE 150°F**		Swell Vol. % NEOPRENE 180°F		Durometer Initial / Durometer Final BUNA N 150°F		Durometer Initial / Durometer Final BUNA N 180°F	
Aroclor 1221	0% wt.	16.3	74/66	19.5	74/64	0.76	71/70	0.81	71/72
	2%	18.9	74/66	22.4	74/64	2.3	71/70	3.3	71/68
	5%	22.9	74/65	25.8	74/63	4.9	71/68	3.7	71/68
Aroclor 1242	0%	16.3	74/66	19.5	74/64	0.76	71/70	0.81	71/72
	2%	18.4	74/66	21.8	74/64	1.6	71/70	2.9	71/69
	5%	21.6	74/65	25.3	74/63	3.9	71/68	4.9	71/72

* Amoco ATF Fluid

** 168 hr exposure time

DSW 200166

STLCOPCB4058230