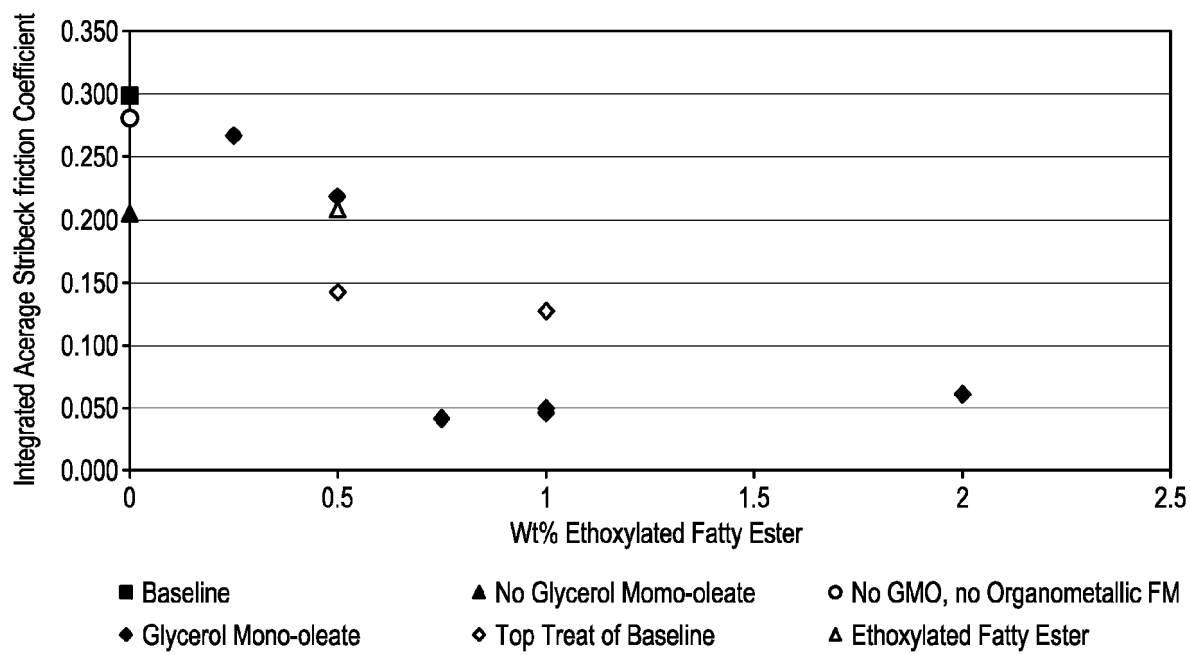


Fig. 1

	Comparative Example 1	Comparative Example 2	Comparative Example 3
Name			
Base Stock (Group III, IV, V)	84.71	85.38	85.23
Remainder of Formulation	14.62	14.62	14.62
Mixed Glyceride Ester	0.52		
Metal-containing Organic Complex	0.15		0.15
Total	100	100	100
KV@100C, ASTM D445, mm ² /s	8.66	8.70	8.76
HTHS@150C, ASTM D4683, cP	2.6	2.6	2.6
Integrated MTM Friction@140C, WI307SF	0.299	0.280	0.283
TEOST 33C, WI191, mg	18	52	57

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Fig. 2



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Fig. 3

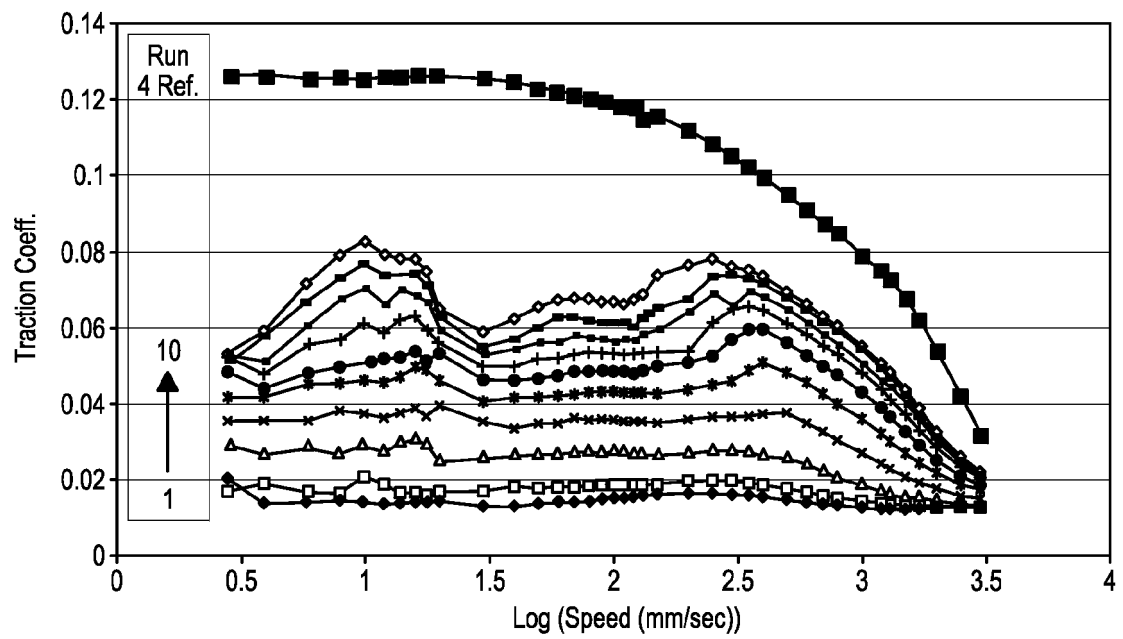


Fig. 4

	Comparative Example 4	Comparative Example 5	Inventive Example 1	Inventive Example 2
Base Oils	Balance	Balance	Balance	Balance
Overbased Calcium Salicylate Detergent	1.20	1.20	1.20	1.80
PIB Dispersant	3.25	3.25	3.25	4.25
Mixed Glyceride Ester	0.52		0.20	0.20
Ethoxylated Fatty Ester		0.52	0.52	0.52
Other Additives (Held Constant)	13.69			
TEOST 33C Deposits (GF-5 limit: 30mg max)	28	43	30	29
MTM Integrated Area at 140°C (WI30/SF)	0.216/0.217	0.183/0.151	0.166/0.171	0.167/0.150

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Fig. 5

Component	Comparative Example 4	Comparative Example 5	Inventive Example 1	Inventive Example 3	Inventive Example 4
Original Base Oil Mix	82.09	82.09	81.89	82.41	82.26
Ethoxylated Fatty Ester		0.52	0.52	0.1	0.25
Mixed Glyceride Ester	0.52		0.2	0.1	0.1
Rest of Formulation (constant)	17.39	17.39	17.39	17.39	17.39
Total	100	100	100	100	100
TEOST 33C Total Deposits (WI193)	28	43	30	32	40
MTM Integrated Area 140°C (WI307SF-9)	0.216 / 0.217	0.183 / 0.151	0.166 / 0.171	0.173	0.152
Kinematic Viscosity 100°C	8.63	8.82	8.82	8.76	8.80

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Fig. 5 (Cont.)

Component	Inventive Example 5	Inventive Example 6	Inventive Example 7	Inventive Example 8	Inventive Example 9	Inventive Example 10
Original Base Oil Mix	82.01	81.51	82.26	82.11	81.86	81.36
Ethoxylated Fatty Ester	0.5	1	0.1	0.25	0.5	1
Mixed Glyceride Ester	0.1	0.1	0.25	0.25	0.25	0.25
Rest of Formulation (constant)	17.39	17.39	17.39	17.39	17.39	17.39
Total	100	100	100	100	100	100
TEOST 33C Total Deposits (Wt193)	27	36	31	25	20	38
MTM Integrated Area 140°C (W/307SF-9)	0.165	0.162	0.156	0.162	0.159	0.167
Kinematic Viscosity 100°C	8.83	8.97	8.71	8.76	8.82	9

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Fig. 5 (Cont.)

Component	Inventive Example 11	Inventive Example 12	Inventive Example 13	Inventive Example 14	Inventive Example 15	Inventive Example 16
Original Base Oil Mix	82.01	81.86	81.61	81.11	81.51	81.36
Ethoxylated Fatty Ester	0.1	0.25	0.5	1	0.1	0.25
Mixed Glyceride Ester	0.5	0.5	0.5	0.5	1	1
Rest of Formulation (constant)	17.39	17.39	17.39	17.39	17.39	17.39
Total	100	100	100	100	100	100
TEOST 33C Total Deposits (W/193)	11	13	20	19	12	20
MTM Integrated Area 140°C (W/1307/SF-9)	0.166	0.155	0.155	0.157	0.181	0.164
Kinematic Viscosity 100°C	8.69	8.74	8.81	8.97	8.69	8.74

Fig. 5 (Cont.)

Component	Inventive Example 17	Inventive Example 18	Inventive Example 19	Inventive Example 20
Original Base Oil Mix	81.11	80.61		
Group I Base Oil			81.89	
Group II Base Oil				81.89
Ethoxylated Fatty Ester	0.5	1	0.52	0.52
Mixed Glyceride Ester	1	1	0.2	0.2
Rest of Formulation (constant)	17.39	17.39	17.39	17.39
Total	100	100	100	100
TEOST 33C Total Deposits (W/I93)	7	10	32	45
MTM Integrated Area 140°C (W/I307SF-9)	0.164	0.161	0.17	0.151
Kinematic Viscosity 100°C	8.83	8.97	10.89	9.66

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Fig. 6

Component	Comparative Example 4	Comparative Example 5	Inventive Example 1	Inventive Example 2	Inventive Example 21
Original Base Oil Mix	82.09	82.09	81.89	80.29	82.59
PIB Dispersant	3.25	3.25	3.25	4.25	3.25
Overbased Calcium Salicylate Detergent	1.2	1.2	1.2	1.8	0.5
Ethoxylated Fatty Ester		0.52	0.52	0.52	0.52
Mixed Glyceride Ester	0.52		0.2	0.2	0.2
Rest of Formulation (constant)	12.94	12.94	12.94	12.94	12.94
Total	100	100	100	100	100
TEOST 33C Total Deposits (WI193)	28	43	30	29	59
MTM Integrated Area 140°C (WI307/SF-9)	0.216 / 0.217	0.183 / 0.151	0.166 / 0.171	0.167 / 0.150	0.173
Kinematic Viscosity 100°C	8.63	8.825	8.821	9.324	8.73

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Fig. 6 (Cont.)

Component	Inventive Example 22	Inventive Example 23	Inventive Example 24	Inventive Example 25	Inventive Example 26	Inventive Example 27
Original Base Oil Mix	81.09	83.14	80.14	83.84	80.84	81.84
PIB Dispersant	3.25	2	5	2	5	2
Overbased Calcium Salicylate Detergent	2	1.2	1.2	0.5	0.5	2.5
Ethoxylated Fatty Ester	0.52	0.52	0.52	0.52	0.52	0.52
Mixed Glyceride Ester	0.2	0.2	0.2	0.2	0.2	0.2
Rest of Formulation (constant)	12.94	12.94	12.94	12.94	12.94	12.94
Total	100	100	100	100	100	100
TEOST 33C Total Deposits (W/I93)	20	36	35	40	40	16
MTM Integrated Area 140°C (W/307SF-9)	0.151	0.148	0.154	0.161	0.171	0.144
Kinematic Viscosity 100°C	8.87	8.29	9.54	8.24	9.46	8.41

Fig. 6 (Cont.)

Component	Inventive Example 28
Original Base Oil Mix	78.84
PIB Dispersant	5
Overbased Calcium Salicylate Detergent	2.5
Ethoxylated Fatty Ester	0.52
Mixed Glyceride Ester	0.2
Rest of Formulation (constant)	12.94
Total	100
TEOST 33C Total Deposits (WI193)	26
MTM Integrated Area 140°C (WI307/SF-9)	0.145
Kinematic Viscosity 100°C	9.68

Fig. 7

Component Description	Example 1	Example 2	Example 3	Example 4	Example 5	Example 6	Example 7
Group IV base stock	51.39	51.54	51.04	54.49	45.19	51.73	50.63
Group IV base stock	0	0	0	0	0	0	0
Group III base stock	30	30	30	30	30	30	30
Group V base stock	5	5	5	5	5	5	5
Borated and/or non-borated succinimides	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Borated and/or non-borated succinimides	3.25	3.25	3.25	3.25	3.25	3.25	3.25
Mg and/or Ca Salicylates	1.2	1.2	1.2	0.6	2.4	1.2	1.2
Mg and/or Ca Salicylates	5	5	5	2.5	10	5	5
Molybdenum & Sulfur containing compounds	0.15	0	0.5	0.15	0.15	0.15	0.15
Zinc dialkyl dithiophosphate (primary, secondary, and/or mixed)	0.74	0.74	0.74	0.74	0.74	0.4	1.5
Dialkyl and/or diarylamines	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Polymethacrylates	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Fumarate vinyl acetate-based polymers	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Silicone compounds	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Olefin-based polymers (block, star, and/or mixed)	0	0	0	0	0	0	0
Ethoxylated Fatty Ester	0.52	0.52	0.52	0.52	0.52	0.52	0.52
Mixed Glyceride Ester	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Total:	100	100	100	100	100	100	100

Fig. 8

Component Description	Example 8	Example 9	Example 10	Example 11	Example 12	Example 13	Example 14
Group IV base stock	0	0	0	0	0	0	0
Group IV base stock	49.39	49.54	49.04	52.49	43.19	49.73	48.63
Group III base stock	30	30	30	30	30	30	30
Group V base stock	5	5	5	5	5	5	5
Borated and/or non-borated succinimides	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Borated and/or non-borated succinimides	3.25	3.25	3.25	3.25	3.25	3.25	3.25
Borated and/or Ca Salicylates	1.2	1.2	1.2	0.6	2.4	1.2	1.2
Mg and/or Ca Salicylates	5	5	5	2.5	10	5	5
Molybdenum & Sulfur containing compounds	0.15	0	0.5	0.15	0.15	0.15	0.15
Zinc dialkyl dithiophosphate (primary, secondary, and/or mixed)	0.74	0.74	0.74	0.74	0.74	0.4	1.5
Dialkyl and/or diarylamines	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Polymethacrylates	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Fumarate vinyl acetate-based polymers	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Silicone compounds	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Olefin-based polymers (block, star, and/or mixed)	2	2	2	2	2	2	2
Ethoxylated Fatty Ester	0.52	0.52	0.52	0.52	0.52	0.52	0.52
Mixed Glyceride Ester	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Total:	100	100	100	100	100	100	100

Fig. 9

Component Description	Example 15	Example 16	Example 17	Example 18	Example 19	Example 20	Example 21
Group IV base stock	0	0	0	0	0	0	0
Group IV base stock	46.89	47.04	46.54	49.99	40.69	47.23	46.13
Group III base stock	30	30	30	30	30	30	30
Group V base stock	5	5	5	5	5	5	5
Borated and/or non-borated succinimides	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Borated and/or non-borated succinimides	3.25	3.25	3.25	3.25	3.25	3.25	3.25
Borated and/or Ca Salicylates	1.2	1.2	1.2	0.6	2.4	1.2	1.2
Mg and/or Ca Salicylates	5	5	5	2.5	10	5	5
Molybdenum & Sulfur containing compounds	0.15	0	0.5	0.15	0.15	0.15	0.15
Zinc dialkyl dithiophosphate (primary, secondary, and/or mixed)	0.74	0.74	0.74	0.74	0.74	0.4	1.5
Dialkyl and/or diarylamines	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Polymethacrylates	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Fumarate vinyl acetate-based polymers	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Silicone compounds	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Olefin-based polymers (block, star, and/or mixed)	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Ethoxylated Fatty Ester	0.52	0.52	0.52	0.52	0.52	0.52	0.52
Mixed Glyceride Ester	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Total:	100	100	100	100	100	100	100