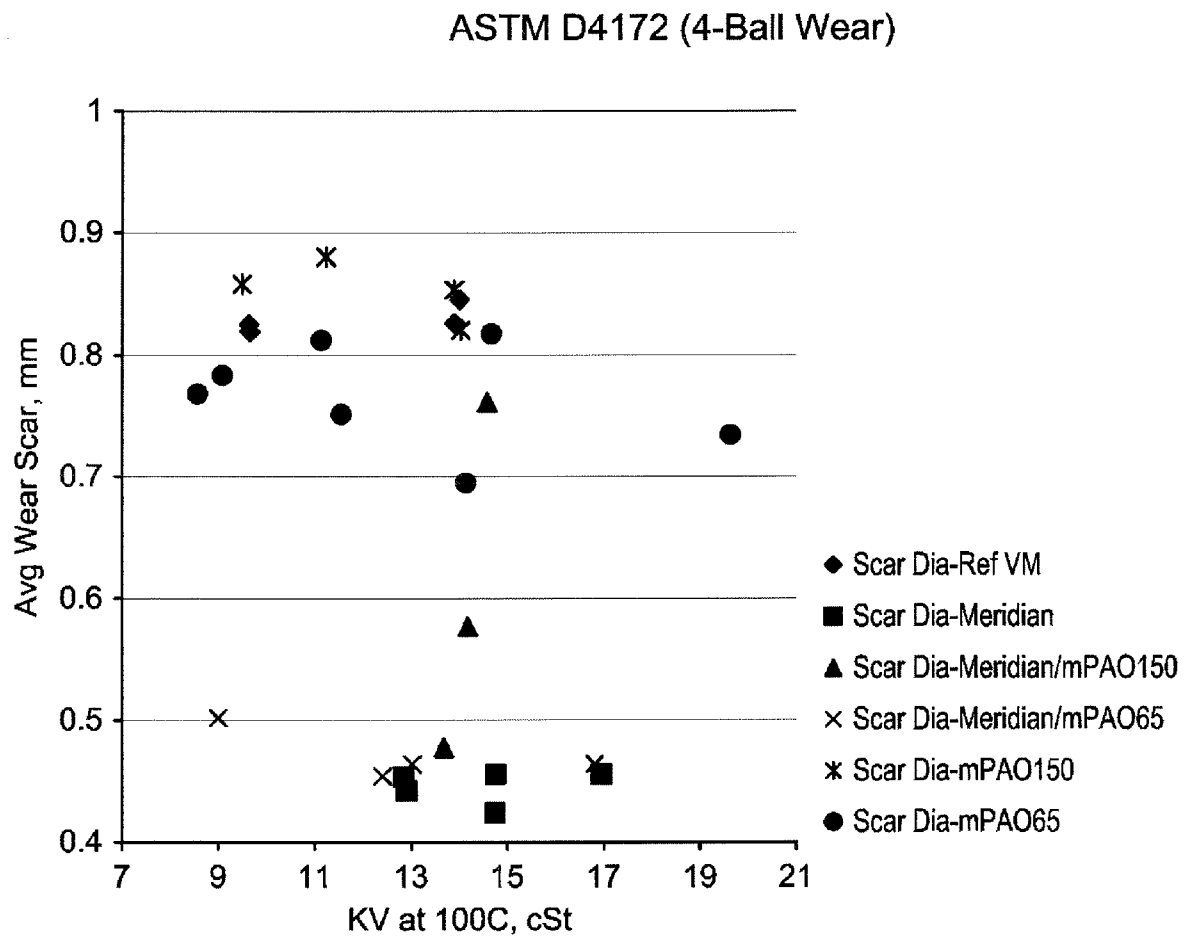
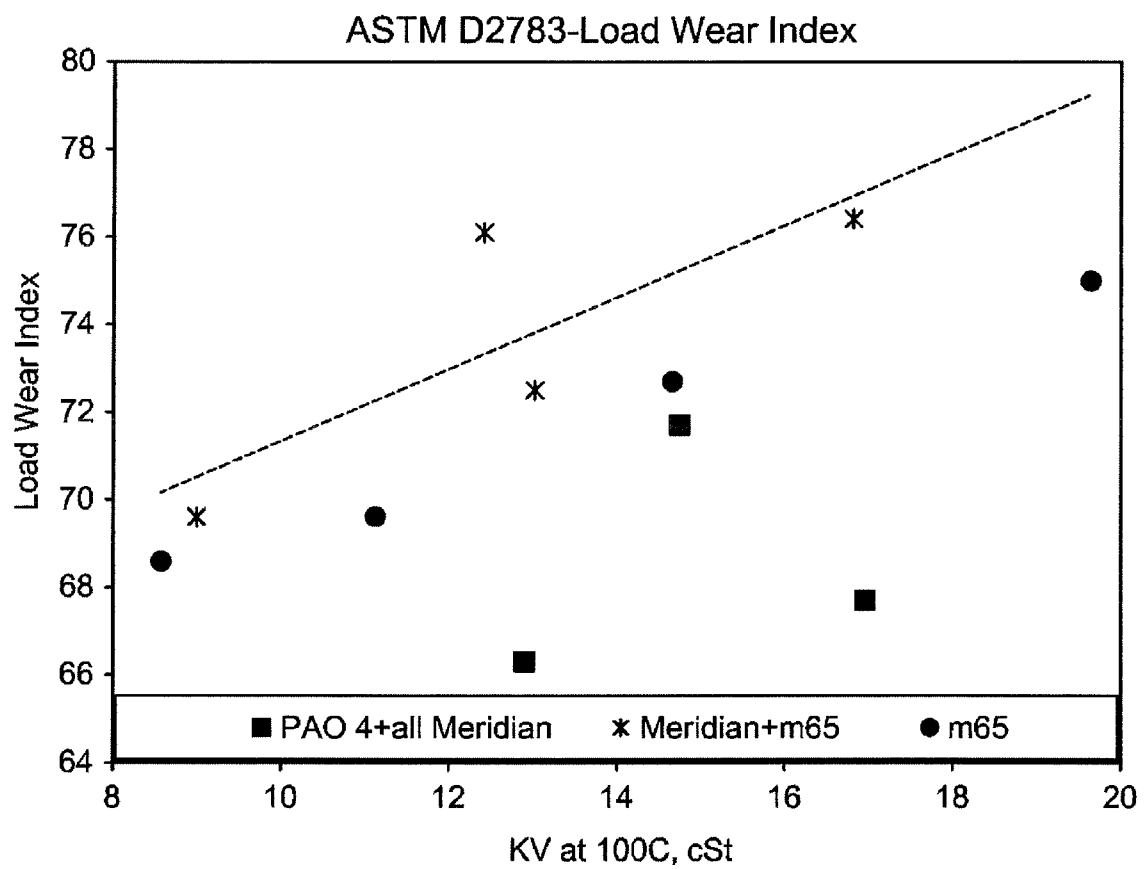
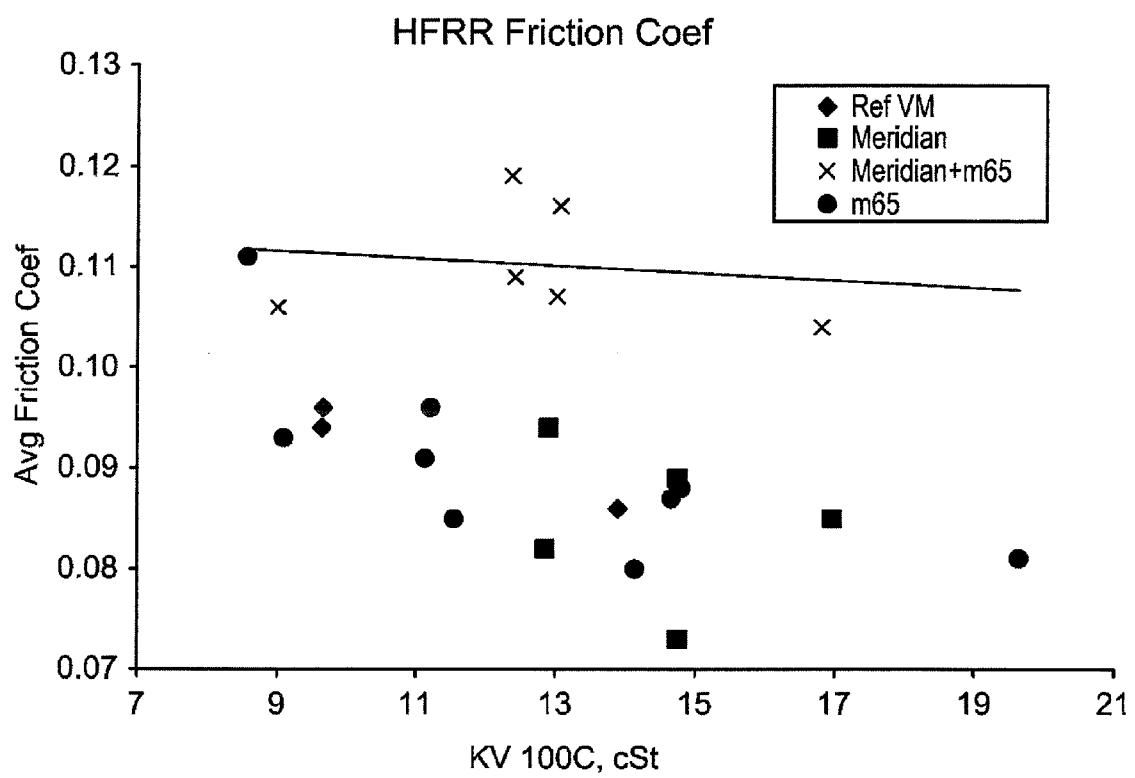
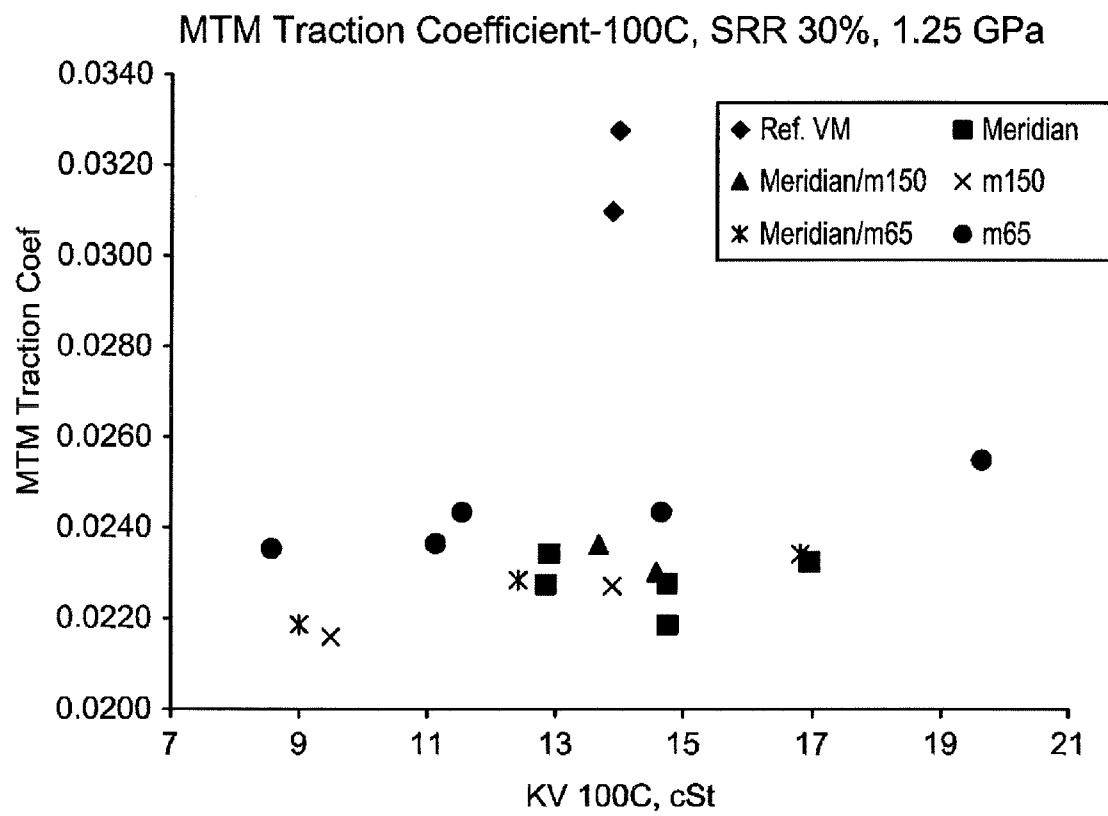


**FIG. 1**

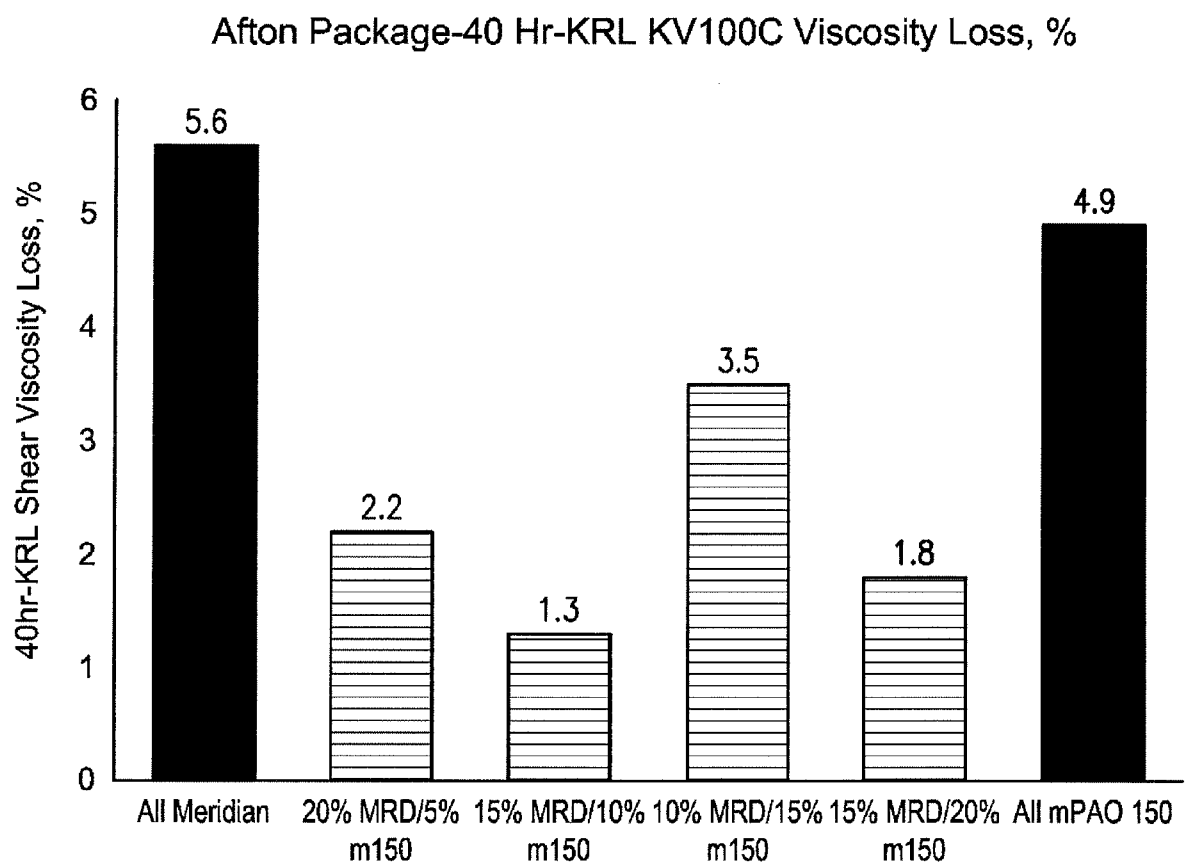
**FIG. 2**

**FIG. 3**

**FIG. 4**

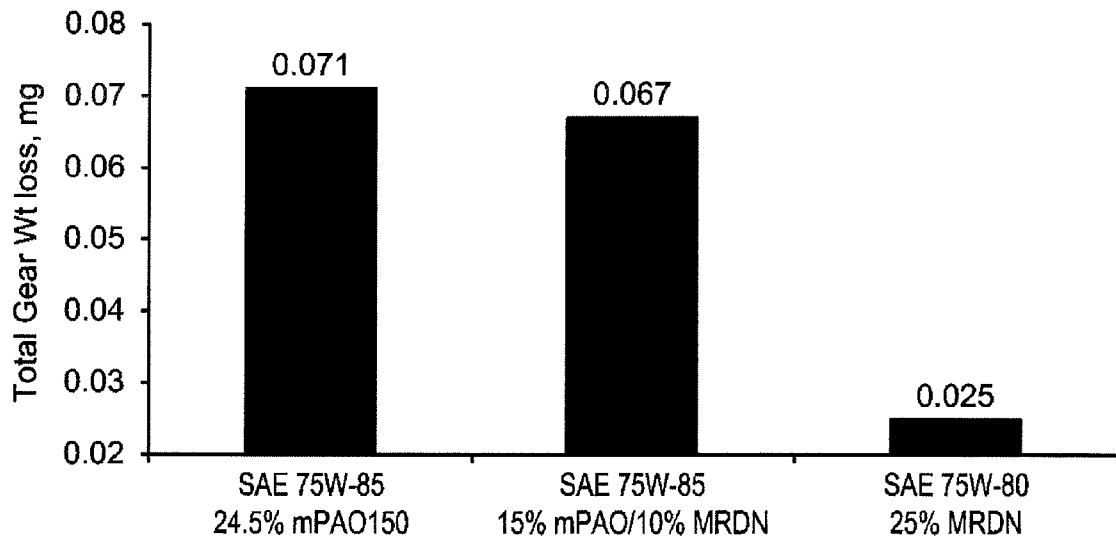
	CVL-ENABLING- A	CVL-ENABLING- B	CVL-ENABLING- C	CVL-ENABLING- D	CVL-ENABLING- E	CVL-ENABLING- F
Wt% mPAO150	0	5	10	15	20	25
Wt% Meridian	25	20	15	10	5	0
Tapered Roller Bearing (CEC L-45-A-99), 40 hrs						
Unsheared	10.45	10.7	10.95	11.2	11.46	11.76
Sheared	9.87	10.47	10.81	10.81	11.25	11.18
Viscosity loss, cSt	0.58	0.23	0.14	0.39	0.21	0.58
Viscosity loss, %	5.6	2.2	1.3	3.5	1.8	4.9

FIG. 5

**FIG. 6**

FZG A10/16.6R/90	SAE 75W-85 24.5% mPAO150	SAE 75W-85 15% mPAO/10% MRDN	SAE 75W-80 25% MRDN
Failure Load Stage	>12	>12	>12
Scuffing (10 max)	0	1	0
Total Gear Wt loss (gm)	0.071	0.067	0.025

FZG Gear Scuffing Test

**FIG. 7**

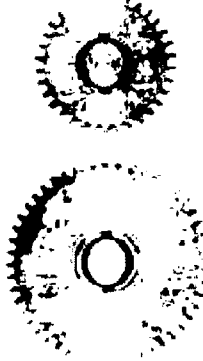
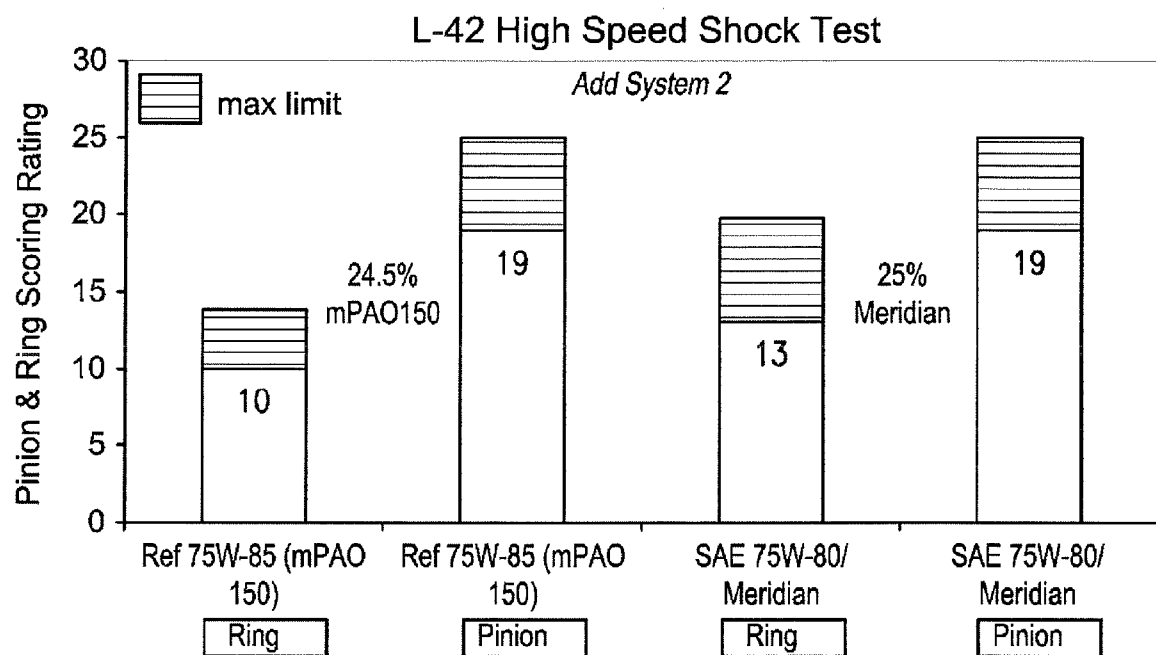
ASTM D5704 Thermal Oxidation Stability	SAE J2360 Std. limit	SAE 75W-85 24.5% mPAO150	SAE 75W-85 15% mPAO/10%Meridian	SAE 75W-80 25% Meridian
NON-REFERENCE TEST LENGTH (hrs)	50	100	100	100
L-60-1 Visc Increase%	100 max	25%	23%	20%
Pentane Insolubles (% wt)	3 max	0.1	0.1	0
Toluene Insolubles (% wt)	2 max	0	0.1	0
Avg Carbon/Varnish (merits)	7.7 max	9.3	9.8	9.6
Average Sludge (merits)	9.4 max	9.4	9.7	9.7
Large & Small Spur Gears				

FIG. 8

**FIG. 9**

Example 1

Description	10063997		12026149		12026339		12026155		11017847		11035871		11035850		11035845		11017845		11018041		11184293		11184305		11184314	
	Blend 1	1	Blend 2	1	Blend 3	1	Blend 4	1	Blend 5	1	Blend 6	1	Blend 7	1	Blend 8	1	Blend 9	1	Blend 10	1	Blend 11	1	Blend 12	1	Blend 13	1
Batch Number	1		1		1		1		1		1		1		1		1		1		1		1		1	
Ref VM/ PAO6	10		10		10		10		10		10		10		10		10		10		10		10		10	
Ref VM/ PAO4	67.3																									
Ref VM/ PAO4			64.9		69.9		72.9		51.9		47.9		43.9		51.76		51.76		51.76		64.9		59.9		53.76	
Ref. Conventional VM	22.6		25		20		17																			
Meridian VM									38		42		46		5		12		22							
mPAO 150															33.14		26.14		16.14		25		30		36.14	
mPAO 65																										
Kinematic Viscosity, 100C	14		13.9		9.64		9.66		12.9		14.75		16.96		14.58		14.19		13.68		9.49		11.23		13.89	
Kinematic Viscosity, 400C	97.18		76.19		56.9		47.62		67.75		79.78		93.77		86.01		81.26		75.66		51.17		63.02		82.08	
Viscosity Index	147		189		154		193		194		195		197		177		182		187		172		173		175	
Four Ball Wear-Scar Diameter	0.845		0.826		0.825		0.819		0.442		0.456		0.456		0.761		0.577		0.477		0.858		0.88		0.853	

Batch Number	Blend 14	Blend 15	Blend 16	Blend 17	Blend 18	Blend 19	Blend 20	Blend 21	Blend 22	Blend 23	Blend 24
	1	1	1	1	1	1	1	1	1	1	1
Description	mPAO 65 + Meridian	mPAO 65 + Meridian	mPAO 65 + Meridian	mPAO 65 + Meridian	mPAO 65	mPAO 65	mPAO 65	mPAO 65	mPAO 65	mPAO 65	mPAO 65
ANG 6043M	10	10	10	10	10	10	10	10	10	10.00	10
PAO 6											
PAO 4	59.9	49.9	39.9	49.9	60	49.9	48.9	57.9	41.4	39.90	29.9
Ref. Conventional VM											
Meridian VM	10	20	25	30							
mPAO 150											
mPAO 65	20	20	25	10	30	40	41	32	48.5	50.0	60
Kinematic Viscosity, 100C	8.999	12.42	16.82	13.02	8.57	11.13	11.54	9.08	14.13	14.66	19.64
Kinematic Viscosity, 400C	47.51	68.85	99.79	70.62	46.53	64.66	67.65	49.89	87.8	92.06	133.4
Viscosity Index	173	181	184	188	164	166	166	165	166	166	169
Four Ball Wear-Scar Diameter	0.502	0.454	0.464	0.464	0.768	0.812	0.751	0.783	0.695	0.817	0.734

FIG. 10

Batch Number	Blend 5		Blend 6		Blend 7		Blend 14		Blend 15		Blend 16		Blend 17		Blend 18		Blend 19		Blend 23		Blend 24	
	1		1		1		1		1		1		1		1		1		1		1	
Description	PAO 4 + all Meridian	PAO 4 + all Meridian	PAO 4 + all Meridian	PAO 4 + all Meridian	mPAO 65 + Meridian	mPAO 65 + Meridian	mPAO 65 + Meridian	mPAO 65 + Meridian	mPAO 65 + Meridian	mPAO 65 + Meridian	mPAO 65 + Meridian	mPAO 65 + Meridian	mPAO 65 + Meridian	mPAO 65 + Meridian	mPAO 65	mPAO 65	mPAO 65	mPAO 65	mPAO 65	mPAO 65	mPAO 65	mPAO 65
ANG 6043	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
PAO 4	51.9	47.9	43.9	43.9	59.9	49.9	49.9	49.9	49.9	39.9	39.9	39.9	49.9	49.9	60	49.9	49.9	39.90	39.90	29.9	29.9	29.9
Meridian VM	38	42	46	46	10	20	20	20	20	25	25	25	30	30								
mPAO 65					20	20	20	20	20	25	25	25	10	10	30	40	40	50.00	50.00	60	60	60
Kinematic Viscosity, 100C	12.9	14.75	16.96	16.96	8.999	12.42	12.42	12.42	12.42	16.82	16.82	16.82	13.02	13.02	8.57	11.13	14.66	14.66	19.64	19.64	19.64	19.64
Kinematic Viscosity, 40C	67.75	79.78	93.77	93.77	47.51	68.85	68.85	68.85	68.85	99.79	99.79	99.79	70.62	70.62	46.53	64.66	64.66	92.06	92.06	133.4	133.4	133.4
Viscosity Index	194	195	197	197	173	181	181	181	181	184	184	184	188	188	164	166	166	166	166	169	169	169
LAST NONSEIZURE LOAD	100	126	100	100	126	126	126	126	126	126	126	126	126	126	100	126	126	126	126	126	126	126
WELD LOAD	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
LOAD WEAR INDEX	66.3	71.7	67.7	67.7	69.6	76.1	76.1	76.1	76.1	76.4	76.4	76.4	72.5	72.5	68.6	69.6	69.6	72.7	72.7	75	75	75

FIG. 11

Batch Number	Blend 2		Blend 3		Blend 4		Blend 5		Blend 6		Blend 7		Blend 15		Blend 16		Blend 17		Blend 18	
	1		1		1		2		1		2		1		2		1		1	
Description	Ref VM/ PAO4	Ref VM/ PAO4	Ref VM/ PAO4	Ref VM/ PAO4	PAO 4 + all Meridian	PAO 4 + all Meridian	PAO 4 + all Meridian	PAO 4 + all Meridian	PAO 4 + all Meridian	PAO 4 + all Meridian	PAO 4 + all Meridian	PAO 4 + all Meridian	mPAO 65 + Meridian	mPAO 65 + Meridian	mPAO 65 + Meridian	mPAO 65 + Meridian	mPAO 65 + Meridian	mPAO 65 + Meridian	mPAO 65 + Meridian	mPAO 65 + Meridian
ANG 6043	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
PAO 4	64.9	69.9	72.9	72.9	51.9	51.9	47.9	47.9	47.9	43.9	43.9	43.9	59.9	59.9	49.9	49.9	39.9	49.9	49.9	49.9
Ref. Conventional VM	25	20	17																	
Meridian VM																				
mPAO 65																				
Kinematic Viscosity, 100C	13.9	9.64	9.66	9.66	12.9	12.85	14.75	14.74	16.96	16.96	16.96	16.96	8.999	12.42	12.38	16.82	13.02	13.02	13.07	13.07
Kinematic Viscosity, 400C	76.19	56.9	47.62	47.62	67.75	67.82	79.78	79.62	93.77	93.77	93.77	93.77	47.51	68.85	68.57	99.79	70.62	70.62	70.92	70.92
Viscosity Index	189	154	193	193	194	193	195	195	197	197	197	197	173	181	181	184	188	188	188	188
HFRR Avg Wear Scar	191	200	196	196	188	204	206	213	192	192	192	192	214	200	181	189	201	201	196	196
HFRR Avg Friction Coef.	0.086	0.094	0.096	0.096	0.094	0.082	0.089	0.073	0.085	0.085	0.085	0.085	0.106	0.109	0.119	0.104	0.107	0.107	0.116	0.116

Batch Number	Blend 19		Blend 20		Blend 21		Blend 22		Blend 23		Blend 24		Blend 25	
	1		1		1		1		1		1		1	
Description	mPAO 65	mPAO 65	mPAO 65	mPAO 65	mPAO 65	mPAO 65	mPAO 65	mPAO 65	mPAO 65	mPAO 65	mPAO 65	mPAO 65	mPAO 65	mPAO 65
ANG 6043	10	10	10	10	10	10	10	10	10	10	10	10	10	10
PAO 4	60	49.9	49.9	49.9	48.9	48.9	57.9	41.4	39.90	39.90	39.90	29.9	29.9	29.9
Ref. Conventional VM														
Meridian VM														
mPAO 65	30	40	40	40	41	41	32	48.5	50.0	50.0	50.0	60	60	60
Kinematic Viscosity, 100C	8.57	11.13	11.21	11.21	11.54	11.54	9.08	14.13	14.66	14.66	14.8	19.64	19.64	19.64
Kinematic Viscosity, 400C	48.53	64.66	65.32	65.32	67.65	67.65	49.89	87.8	92.06	92.06	93.05	133.4	133.4	133.4
Viscosity Index	164	166	166	166	166	166	165	166	166	166	167	169	169	169
HFRR Avg Wear Scar	201	199	186	186	201	201	212	185	184	195	195	169	169	169
HFRR Avg Friction Coef.	0.111	0.091	0.096	0.096	0.085	0.085	0.093	0.08	0.087	0.088	0.088	0.081	0.081	0.081

FIG. 12