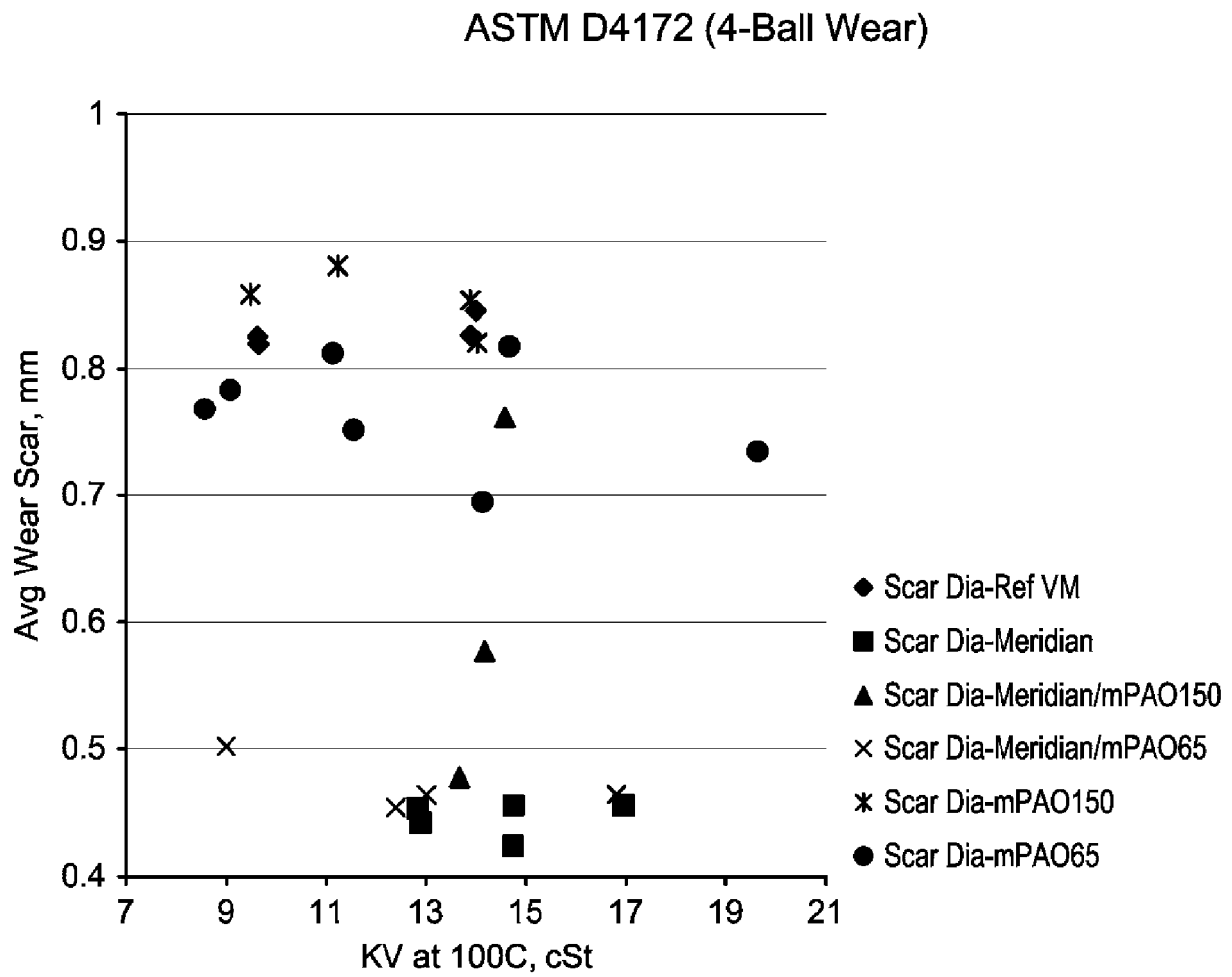
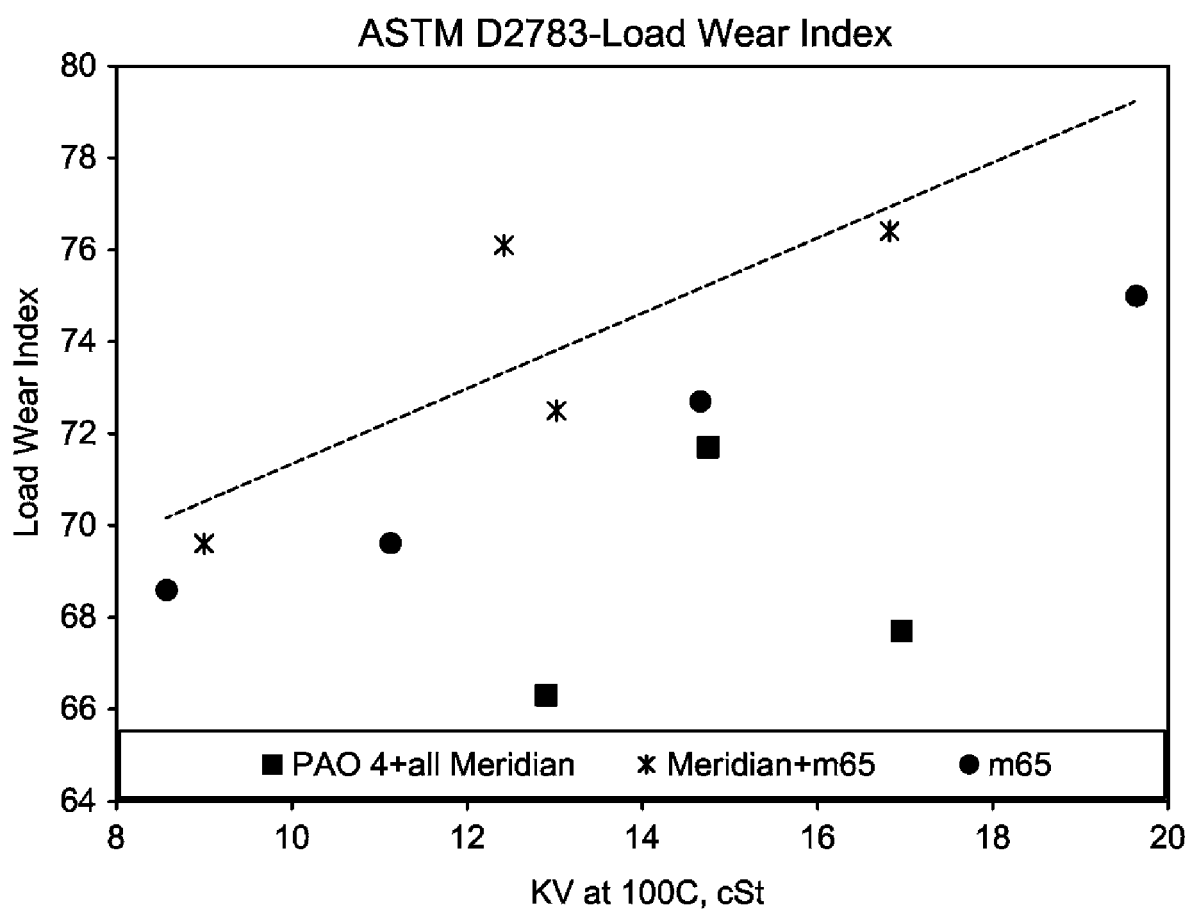


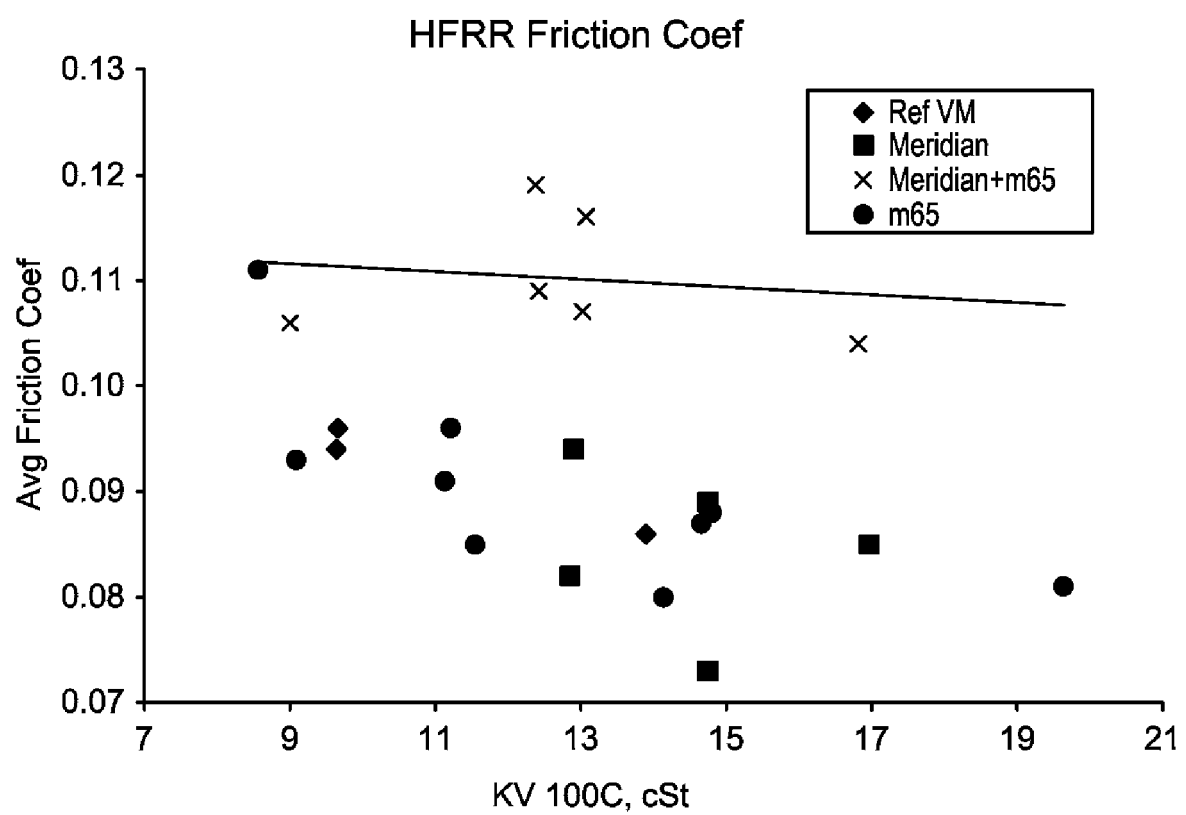
1/12

**FIG. 1**

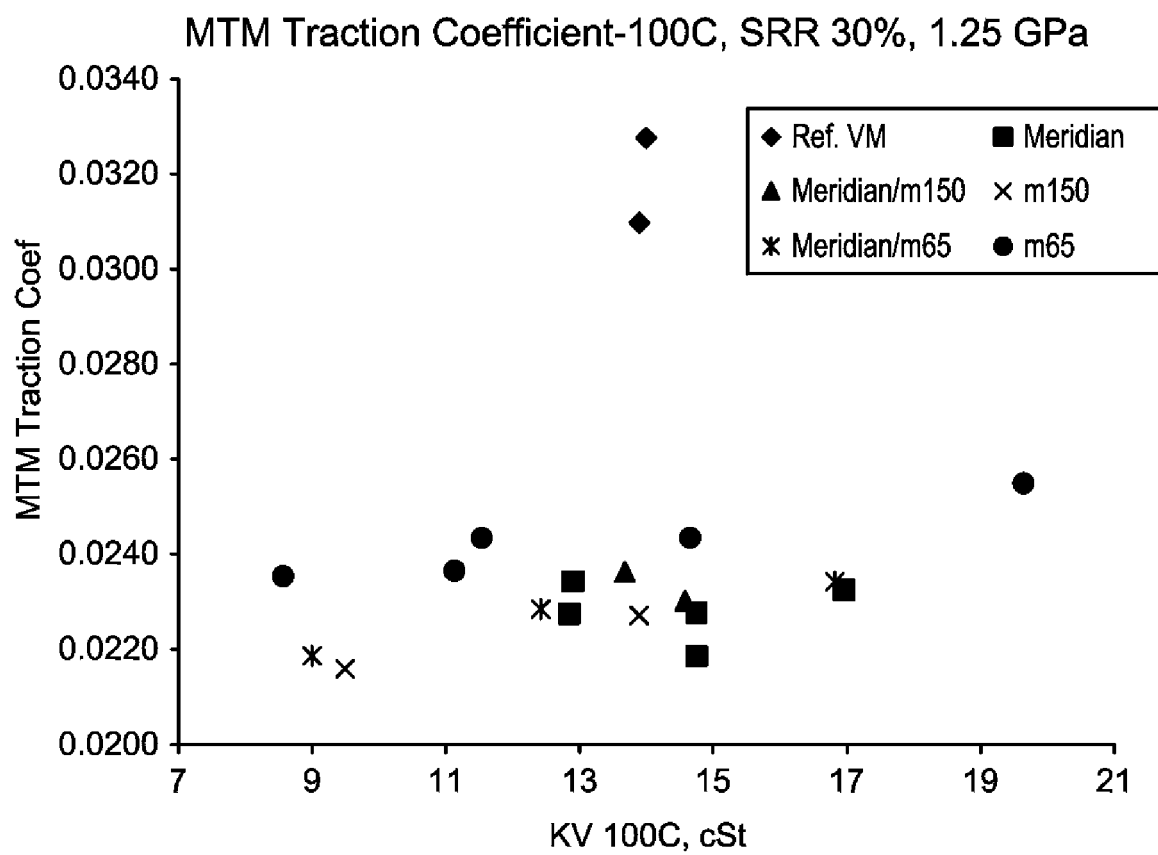
2/12

**FIG. 2**

3/12

**FIG. 3**

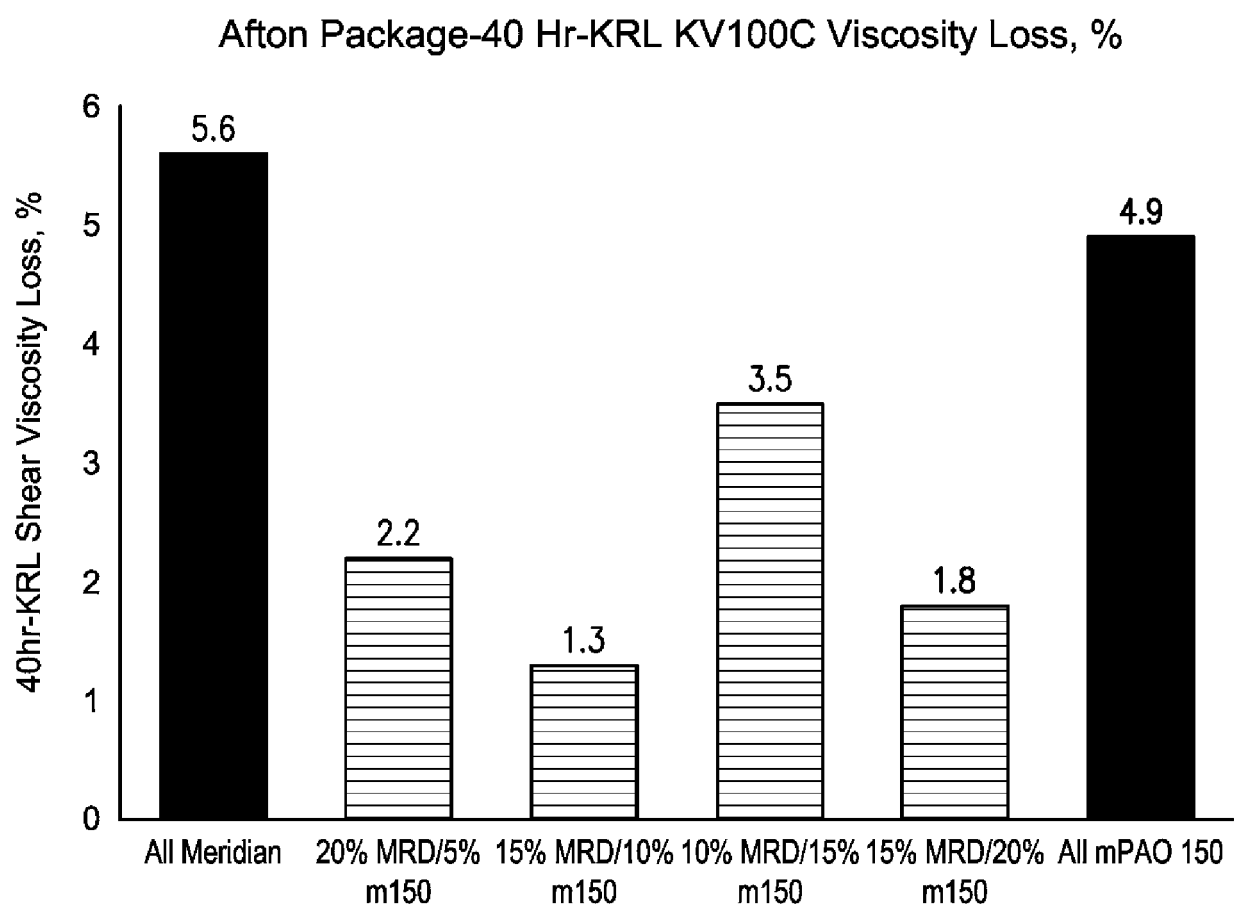
4/12

**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

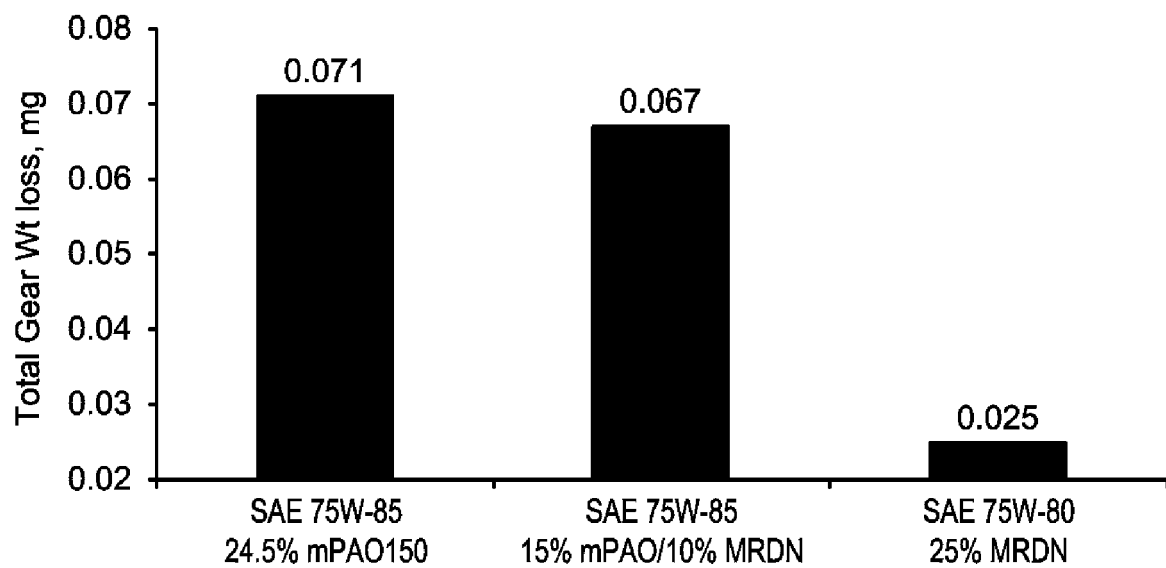
6/12

**FIG. 6**

7/12

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**

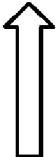
ASTM D5704 Thermal Oxidation Stability	SAE J2360 Std. limit	SAE 75W-85 24.5% mPAO150	SAE 75W-85 15% mPAO/10%Meridian	SAE 75W-80 25% Meridian
NON-REFERENCE TEST LENGTH (hrs)	50	100	100	100
L-60-1 Visc Increase%	100 max	25%	23%	20%
Pentane Insolubles (% wt)	3 max	0.1	0.1	0
Toluene Insolubles (% wt)	2 max	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

9/12

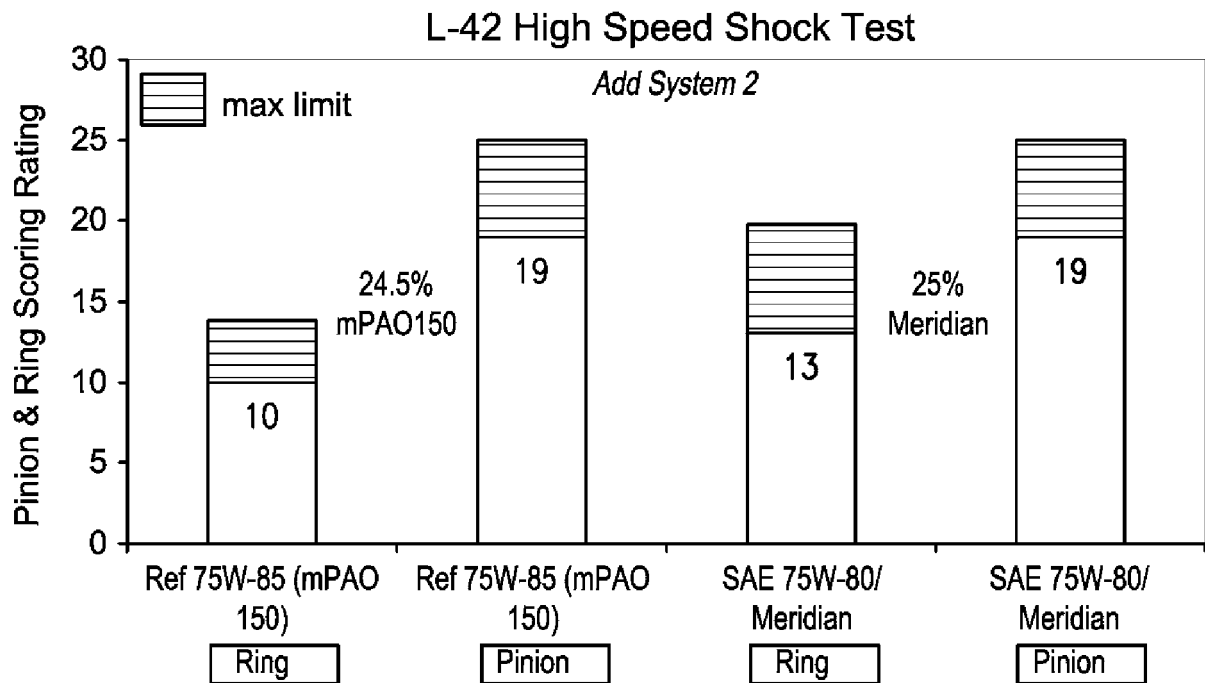


FIG. 9

10/12

Example 1

Batch Number

	10063997 Blend 1	12026149 Blend 2	12026339 Blend 3	12026155 Blend 4	11017847 Blend 5	11035871 Blend 6	11035850 Blend 7	11035845 Blend 8	11017845 Blend 9	11018041 Blend 10	11184293 Blend 11	11184305 Blend 12	11184314 Blend 13
Ref VM/ PAO6	10	10	10	10	10	10	10	10	10	10	10	10	10
ANG 6043	67.3												
PAO 6		64.9	69.9	72.9	51.9	47.9	43.9	51.76	51.76	51.76	64.9	59.9	53.76
PAO 4	22.6	25	20	17									
Ref. Conventional VM													
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

	Blend 14	Blend 15	Blend 16	Blend 17	Blend 18	Blend 19	Blend 20	Blend 21	Blend 22	Blend 23	Blend 24
mPAO 65 + Meridian	10	10	10	10	10	10	10	10	10	10.00	10
ANG 6043M											
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	mPAO 65 + Meridian	mPAO 65 + Meridian	mPAO 65 + Meridian	mPAO 65 + Meridian	mPAO 65	mPAO 65	mPAO 65	mPAO 65
ANG 6043	10	10	10	10	10	10	10	10	10	10.00	10
PAO 4	51.9	47.9	43.9	59.9	49.9	39.9	49.9	60	49.9	39.90	29.9
Meridian VM	38	42	46	10	20	25	30				
mPAO 65				20	20	25	10	30	40	50.00	60
Kinematic Viscosity, 100C	12.9	14.75	16.96	8.999	12.42	16.82	13.02	8.57	11.13	14.66	19.64
Kinematic Viscosity, 40C	67.75	79.78	93.77	47.51	68.85	99.79	70.62	46.53	64.66	92.06	133.4
Viscosity Index	194	195	197	173	181	184	188	164	166	166	169
LAST NONSEIZURE LOAD	100	126	100	126	126	126	126	100	126	126	126
WELD LOAD	400	400	400	400	400	400	400	400	400	400	400
LOAD WEAR INDEX	66.3	71.7	67.7	69.6	76.1	76.4	72.5	68.6	69.6	72.7	75

FIG. 11

12/12

Batch Number	Blend 2		Blend 3		Blend 4		Blend 5		Blend 5		Blend 6		Blend 6		Blend 7		Blend 15		Blend 16		Blend 16		Blend 17		Blend 18		Blend 18	
	1		1		1		1		2		1		2		1		1		1		2		1		1		1	
Description	Ref VM/ PAO 4	Ref VM/ PAO 4	Ref VM/ PAO 4	Ref VM/ PAO 4	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	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 + Meridian	mPAO 65 + Meridian	
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	64.9	69.9	72.9	72.9	51.9	51.9	47.9	47.9	47.9	47.9	47.9	47.9	47.9	47.9	47.9	59.9	59.9	49.9	49.9	49.9	49.9	39.9	39.9	49.9	49.9	49.9	49.9	49.9
	25	20	17	17																								
Ref. Conventional VM	Meridian VM				38	38	42	42	42	42	46	46				10	20	20	20	20	25	25	30	30				
																20	20	20	20	25	25	10	10					
	mPAO 65																											
Kinematic Viscosity, 100C	13.9	9.64	9.66	9.66	12.9	12.85	14.75	14.74	14.74	14.74	16.96	16.96				8.999	12.42	12.38	12.38	16.82	16.82	13.02	13.02					13.07
	76.19	56.9	47.62	47.62	67.75	67.82	79.78	79.62	79.62	79.62	93.77	93.77				47.51	68.85	68.57	68.57	99.79	99.79	70.62	70.62					70.92
	189	154	193	193	194	193	195	195	195	195	197	197				173	181	181	181	184	184	188	188					188
	191	200	196	196	188	204	206	213	213	213	192	192				214	200	181	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	0.073	0.073	0.085	0.085				0.106	0.109	0.119	0.119	0.104	0.104	0.107	0.107					0.116

Batch Number	Blend 19		Blend 20		Blend 20		Blend 21		Blend 22		Blend 23		Blend 24		Blend 24		Blend 25	
	1		1		2		1		1		1		1		2		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	mPAO 65	mPAO 65	mPAO 65	mPAO 65
ANG 6043	10	10	10	10	10	10	10	10	10	10	10	10	10.00	10.00	10.00	10	10	10
PAO 4	60	49.9	49.9	49.9	48.9	48.9	48.9	48.9	57.9	41.4	39.90	39.90	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	41	41	32	48.5	50.0	50.0	50.0	50.0	50.0	60	60	60
Kinematic Viscosity, 100C	8.57	11.13	11.21	11.21	11.54	11.54	11.54	11.54	9.08	14.13	14.66	14.66	14.66	14.66	14.8	19.64	19.64	19.64
Kinematic Viscosity, 400C	46.53	64.66	65.32	65.32	67.65	67.65	67.65	67.65	49.89	87.8	92.06	92.06	92.06	92.06	93.05	133.4	133.4	133.4
Viscosity Index	164	166	166	166	166	166	166	166	165	166	166	166	166	166	167	169	169	169
HFRR Avg Wear Scar	201	199	186	186	201	201	201	201	212	185	184	184	184	184	195	169	169	169
HFRR Avg Friction Coef.	0.111	0.091	0.096	0.096	0.085	0.085	0.085	0.085	0.093	0.08	0.087	0.087	0.087	0.087	0.088	0.081	0.081	0.081

FIG. 12