The present invention is explained below by means of examples and comparative examples under the aforementioned microclutch test conditions, but these are only representative examples and the Invention is in no way limited by them.

TABLE 2

	Ex. 1	Ex. 2	Ex. 3	Comp. Ex. 1	Comp. Ex. 2	Comp. Ex. 3	Comp. Ex. 4	Comp. Ex. 5
Kinematic Viscosity (100°C), mm^2/s	10.5	10.4	10.5	10.5	10.4	10.2	10.6	10.6
CCS Viscosity (-25°C), cP	6780	6880	6980	6800	6840	6870	6880	6920
Zn, ~~wt. %~~ppm	1370	1370	1370	1370	1370	1370	1370	1370
P, ~~wt. %~~ppm	1200	1200	1200	1200	1200	1200	1200	1200
Ca, ~~wt. %~~ppm	1210	1190	2840	4070	3350	3710	2840	2840
Mg, ~~wt. %~~ppm	1750	1750	2210	0	440	230	595	750
Mo, ~~wt. %~~ppm	50	50	50	50	50	50	50	50
B, ~~wt. %~~ppm	190	190	190	190	190	190	190	190
S, ~~wt. %~~ppm	3220	3270	3200	3190	3190	3190	3200	3200
N, ~~wt. %~~ppm	300	300	300	300	~~1370~~ 300	~~1370~~ 300	~~1370~~ 300	~~1370~~ 300
TBN (D4739)	10.9	10.4	11.5	10.8	10.6	10.7	10.7	10.8
Ca/Mg mass ratio	0.69	0.68	1.29	> 40	7.61	16.13	4.77	3.79
Komatsu Micro Clutch Test (JCMAS P047)								
40 °C	0.168	0.176	0.172	0.155	0.160	0.159	0.159	0.159
60 °C	0.161	0.171	0.168	0.147	0.149	0.148	0.148	0.148
80 °C	0.155	0.165	0.163	0.137	0.139	0.139	0.139	0.139
100 °C	0.149	0.158	0.156	0.129	0.131	0.131	0.131	0.131
120 °C	0.145	0.151	0.149	0.123	0.127	0.128	0.128	0.128
140 °C	0.149	0.143	0.149	0.117	0.122	0.122	0.125	0.125
Sulfate ash (ASTM D874), wt%	1.3	1.3	2.0	1.6	1.6	1.6	1.5	1.5

Diesel engine oils having JASO DH-1, API CG-4, CH-4 or CI-4, are widely used not only for internal combustion engines, but also hydraulic and transmission systems in industrial machinery, especially transport, construction, and agricultural machinery. To obtain a higher

WHAT IS CLAIMED IS:

1. A lubricating oil composition comprising:

(a) a major amount of oil of lubricating viscosity,

(b) a calcium containing detergent,

(c) at least 800 ppm of Mg from a magnesium containing detergent

(d) less than 600 ppm of N from a nitrogen containing dispersant;

wherein the lubricating oil composition has a phosphorus content of from 0.06 to 0.15 wt. %, a sulfur content of less than 0.5 wt. % and a sulfated ash content of from 0.8 wt. % to 2.0 wt. %,

wherein the mass ratio of Ca to Mg is from 1:2 to 4:1, and

wherein said lubricating oil composition is suitable for lubricating the crankcase of an internal combustion engine of a vehicle and at least one of a wet clutch, brakes, torque converters, gear systems, hydro static transmissions and hydraulic systems.

2. The lubricating oil composition of claim 1, wherein the calcium from the calcium containing detergent is present from at least 1000 ppm lubricating oil composition.

3. The lubricating oil composition of claim 1, wherein the total base number (TBN) of the lubricating oil composition is from 8 to 16 mg KOH/g as determined using ASTM D 2896.

4. The lubricating oil composition of claim 1, wherein the sulfated ash is from 0.80 to 1.60 wt. % as determined by ASTM D 874.

5. The lubricating oil composition of claim 1, wherein the vehicle is an industrial machinery, an automobile, a truck, or other vehicle.

6. The lubricating oil composition of claim 5, wherein the industrial machinery is a transport, a construction or an agricultural machinery

7. The lubricating oil composition of claim 1, wherein the vehicle is equipped with an automatic transmission, or a continuously variable transmission.

8. A method for maintaining friction in a vehicle comprising lubricating said vehicle with a lubricating oil composition comprising:

(a) a major amount of oil of lubricating viscosity,

(b) a calcium containing detergent,

(c) at least 800 ppm of Mg from a magnesium containing detergent

(d) less than 600 ppm of N from a nitrogen containing dispersant;

wherein the lubricating oil composition has a phosphorus content of from 0.06 to 0.15 wt. %, a sulfur content of less than 0.5 wt. % and a sulfated ash content of from 0.8 wt. % to 2.0 wt. %,

wherein the mass ratio of Ca to Mg is from 1:2 to 4:1, and

wherein said method further comprises ~~lubricating oil composition is suitable for~~ lubricating the crankcase of an internal combustion engine of said vehicle and at least one of a wet clutch, brakes, torque converters, gear systems, hydro static transmissions and hydraulic systems with the lubricating oil composition.

9. The method of claim 8, wherein the calcium from the calcium containing detergent is present from at least 1000 ppm lubricating oil composition.

10. The method of claim 8, wherein the vehicle is an industrial machinery, an automobile, a truck, or other vehicle.

11. The lubricating oil composition of claim 10, wherein the industrial machinery is a transport, a construction, or an agricultural machinery.

12. The method of claim 8, wherein the vehicle is equipped with an automatic transmission, or a continuously variable transmission.