

HYDRAULIC FLUID SPECIFICATIONS

CATEGORY	ELEMENT	PARTS PER MILLION (PPM)					
		STANDARD FLUID			DPG ULTRA-LIFE FLUID		
		NORMAL	ABNORMAL	CRITICAL	NORMAL	ABNORMAL	CRITICAL
Wear Metals	Iron (FE)	0 – 74	75 – 99	≥100	0 - 74	75 – 99	≥100
	Chromium (Cr)	0 – 19	20 – 39	≥ 40	0 – 19	20 – 39	≥ 40
	Lead (Pb)	0 – 39	40 - 49	≥ 50	0 – 39	40 – 49	≥ 50
	Copper (Cu)	0 – 49	50 – 74	≥ 75	0 – 49	50 – 74	≥ 75
	Tin (Sn)	0 – 9	10 – 29	≥ 30	0 – 9	10 – 29	≥ 30
	Aluminum (Al)	0 – 19	20 – 29	≥ 30	0 – 19	20 – 29	≥ 30
	Nickel (Ni)	0 - - 4	5 – 9	≥ 10	0 – 4	5 – 9	≥ 10
	Silver (Ag)	0 – 4	5 – 9	≥ 10	0 – 4	5 – 9	≥ 10
	Titanium (Ti)	0 – 4	5 – 9	≥ 10	0 – 4	5 – 9	≥ 10
	Manganese (Mn)	0 – 4	5 – 9	≥ 10	0 – 4	5 – 9	≥ 10
	Vanadium (V)	0 – 4	5 – 9	≥ 10	0 – 4	5 – 9	≥ 10
Contaminants	Silicon (Si)	0 – 9	10 – 24	≥ 25	0 – 9	10 – 24	≥ 25
	Boron (B)	0 – 4	5 – 9	≥ 10	0 – 4	5 – 9	≥ 10
	Sodium (Na)	0 – 9	10 – 24	≥ 25	0 – 9	10 – 24	≥ 25
	Potassium (K)	0 – 4	5 – 9	≥ 10	0 – 4	5 – 9	≥ 10
Particle Count (per 100 ml)	> 5 (ISO)	< 64,000 (ISO17 – 18)	64,000 – 250,000 (ISO 17 – 18)	250,000 – 1,000,000 (ISO 19 – 20)	<16,000 (ISO 14)	16,000 – 64,000 (ISO 15 – 16)	64,000 – 250,000 (ISO 17 – 18)
	>15 (ISO)	<8,000 (ISO 13)	8,000 – 32,000 (ISO 14 – 15)	32,000 – 1,300,000 (ISO 16 – 17)	<2,000 (ISO 11)	2,000 – 8,000 (ISO 12 – 13)	8,000 – 32,000 (ISO 14 – 15)
Dispersant/ Detergent Additives	Magnesium (Mg)	10 – 110	<10	N/A	50 – 200	<50	N/A
	Calcium (Ca)	≥ 5	< 5	N/A	≥ 15	< 15	N/A
	Barium (Ba)	0 – 50	N/A	N/A	0 – 50	N/A	N/A
Anti-Wear Additives	Phosphorus (P)	≥ 200	100 – 200	N/A	≥300	200 – 300	N/A
	Zinc (Zn)	≥ 300	200 – 300	N/A	≥ 400	300 – 400	N/A
	Molybdenum (Mo)	0 – 10	>10	N/A	0 – 10	> 10	N/A
Water	W – KF	0 - .01%	.02% - .05%	> .05%	0 - .01%	.02% - .05%	> .05%
Viscosity	cSt @ 40°	41.4 – 50.6	35.5 – 41.3 50.7 – 61.1	≤ 35.2 ^(a) ≤ 61.2 ^(b)	41.4 – 50.6	35.5 – 41.3 50.7 – 61.1	≤ 35.2 ^(a) ≤ 61.2 ^(b)

^(a) Because it would now be an ISO 32 hydraulic oil

^(b) Because it would now be an ISO 68 hydraulic oil