

OIL ANALYSIS REPORT

Sample Rating Trend



KAESER BSD 50 8028748 (S/N 1195)

Compressor

KAESER SIGMA (OEM) M-460 (--- GAL)

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Chromium ppm ASTM D5185m >10 0 0 0 Nickel ppm ASTM D5185m >3 0 0 0 Tittanium ppm ASTM D5185m >2 0 0 <1 0 Silver ppm ASTM D5185m >2 0 0 <1 0 Aluminum ppm ASTM D5185m >10 0 0 0 0 Lead ppm ASTM D5185m >10 0 0 0 0 Copper ppm ASTM D5185m >50 10 10 10 10 Tin ppm ASTM D5185m 0 0 0 0 0 0 Cadadhium ppm ASTM D5185m 0 0 0 0 2 2 Barium ppm ASTM D5185m 0 0 0 0 0 0 0 0 0 0 0 0 0 <th></th> <th></th> <th>Ma</th> <th>2022</th> <th>Jan 2023 Feb 202</th> <th>4</th> <th></th>			Ma	2022	Jan 2023 Feb 202	4	
Sample Number Client Info KCPA002552 KCP5761 KCP41044	SAMDLE INFORM	MATION					history?
Sample Date Client Info 07 Feb 2024 31 Jan 2023 11 Mar 2022		IATION		IIIIII/Dase			
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Oil Age hrs Client Info 0 3199 4371 Oil Changed Client Info N/A Changed Changed Sample Status Client Info N/A Changed Changed WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 0 0 0 Chromium ppm ASTM D5185m >50 0 0 0 Nickel ppm ASTM D5185m >3 0 0 0 Silver ppm ASTM D5185m >3 <1		,			01 1 00 -0-1		
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WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 0 0 0 Chromium ppm ASTM D5185m >3 0 0 0 Nickel ppm ASTM D5185m >3 -1 0 0 Silver ppm ASTM D5185m >3 -1 0 0 Aluminum ppm ASTM D5185m >10 0 -1 0 Aluminum ppm ASTM D5185m >10 0 -1 0 Lead ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >10 0 0 0 Vanadium ppm ASTM D5185m >10 0 0 0 Cadrium ppm ASTM D5185m 0 0 0 2 Barium ppm ASTM D5185m 0 0 0 <td< th=""><th></th><th></th><th>Client Info</th><th></th><th></th><th></th><th></th></td<>			Client Info				
Pron	Sample Status				NORMAL	ABNORMAL	ABNORMAL
Chromium ppm ASTM D5185m >10 0 0 0 Nickel ppm ASTM D5185m >3 0 0 0 Tittanium ppm ASTM D5185m >2 0 0 <1 0 Silver ppm ASTM D5185m >2 0 0 <1 0 Aluminum ppm ASTM D5185m >10 0 0 0 0 Lead ppm ASTM D5185m >10 0 0 0 0 Copper ppm ASTM D5185m >50 10 10 10 10 Tin ppm ASTM D5185m 0 0 0 0 0 0 Cadadhium ppm ASTM D5185m 0 0 0 0 2 2 Barium ppm ASTM D5185m 0 0 0 0 0 0 0 0 0 0 0 0 0 <th>WEAR METALS</th> <th></th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	WEAR METALS		method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m >3	Iron	ppm	ASTM D5185m	>50	0	0	0
Titanium ppm ASTM D5185m >3 <1 0 0 0 Silver ppm ASTM D5185m >2 0 0 0 <1 Aluminum ppm ASTM D5185m >10 0 <1 0 Lead ppm ASTM D5185m >10 0 0 <1 0 Copper ppm ASTM D5185m >10 0 0 0 Tin ppm ASTM D5185m >10 0 0 0 Tin ppm ASTM D5185m >10 0 0 0 Tin ppm ASTM D5185m >10 0 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 0 Barium ppm ASTM D5185m 0 0 0 0 0 Barium ppm ASTM D5185m 0 0 0 0 0 Barium ppm ASTM D5185m 0 0 0 0 0 0 Magnesium ppm ASTM D5185m 0 0 0 0 0 Magnesium ppm ASTM D5185m 0 0 0 0 0 Magnesium ppm ASTM D5185m 0 0 0 0 0 Calcium ppm ASTM D5185m 0 0 0 0 0 Calcium ppm ASTM D5185m 0 0 0 0 0 Sulfur ppm ASTM D5185m 0 0 0 10 <1 3 Cinc ppm ASTM D5185m 0 0 0 10 <1 3 Cinc ppm ASTM D5185m 0 0 0 0 0 Sulfur ppm ASTM D5185m 0 0 0 10 <1 3 Silicon ppm ASTM D5185m 0 0 0 0 0 Sulfur ppm ASTM D5185m 225 0 1 0 0 0 Sodium ppm ASTM D5185m 1 0 0 0 0 0 Sodium ppm ASTM D5185m 1 0 0 0 0 0 Sodium ppm ASTM D5185m 225 0 1 0 0 0 0 Sodium ppm ASTM D5185m 1 0 0 0 0 0 Sodium ppm ASTM D5185m 1 0 0 0 0 0 Sodium ppm ASTM D5185m 225 0 1 0 0 0 0 Sodium ppm ASTM D5185m 1 0 0 0 0 0 Sodium ppm ASTM D5185m 1 0 0 0 0 0 Sodium ppm ASTM D5185m 225 0 1 0 0 0 0 0 Sodium ppm ASTM D5185m 1 0 0 0 0 0 0 Sodium ppm ASTM D5185m 220 0 0 0 0 0 0 Sodium ppm ASTM D5185m 220 0 0 0 0 0 0 0 Sodium ppm ASTM D5185m 220 0 0 0 0 0 0 0 Sodium ppm ASTM D5185m 220 0 0 0 0 0 0 0 Sodium ppm ASTM D5185m 220 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Chromium	ppm	ASTM D5185m	>10	0	0	0
Silver	Nickel	ppm	ASTM D5185m	>3	0	0	0
Aluminum ppm ASTM D5185m >10 0 <1	Titanium	ppm	ASTM D5185m	>3	<1	0	0
Lead ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >50 10 10 10 Tin ppm ASTM D5185m 0 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 2 Barium ppm ASTM D5185m 90 0 0 0 Malogheanum ppm ASTM D5185m 90 0 0 0 Magnesium ppm ASTM D5185m 0 0 0 0 Calcium ppm ASTM D5185m 0 0 0 0 Phosphorus ppm ASTM D5185m 0 0 0 0	Silver	ppm	ASTM D5185m	>2	0	0	<1
Copper ppm ASTM D5185m >50 10 10 10 10 Tin ppm ASTM D5185m >10 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 2 Barium ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 0 0 0 0 Calcium ppm ASTM D5185m 100 0 <1 3 Calcium ppm ASTM D5185m 0 0 0 0 0 Sulfur ppm ASTM D5185m 0 0	Aluminum	ppm	ASTM D5185m	>10	0	<1	0
Tin	Lead	ppm	ASTM D5185m	>10	0	0	0
Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 2 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Manganese ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 100 0 <1	Copper	ppm	ASTM D5185m	>50	10	10	10
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Boron ppm ASTM D5185m 0 0 0 2 Barium ppm ASTM D5185m 90 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Manganese ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 100 0 <1	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 90 0 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Manganese ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 100 0 <1 3 Calcium ppm ASTM D5185m 0 0 0 0 0 Phosphorus ppm ASTM D5185m 0 0 0 0 0 Zinc ppm ASTM D5185m 0 0 0 0 0 Sulfur ppm ASTM D5185m 0 0 0 0 0 Sulfur ppm ASTM D5185m >25 0 1 0 <1 0 Sodium ppm ASTM D5185m >25 0 1 0 <1 0 <1 0 <1 0 <1 0 <1 0	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 0 0 0 0 Manganese ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 100 0 <1 3 Calcium ppm ASTM D5185m 0 0 0 0 Phosphorus ppm ASTM D5185m 0 0 0 0 Zinc ppm ASTM D5185m 0 0 0 0 Sulfur ppm ASTM D5185m 23500 13272 17003 13562 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 0 1 0 Sodium ppm ASTM D5185m >20 0 0 0 Water % ASTM D5185m >20 0 0 0 Water % ASTM D6304 >0.05 0.005 0	Boron	ppm	ASTM D5185m	0	0	0	2
Manganese ppm ASTM D5185m 0 0 0 Magnesium ppm ASTM D5185m 100 0 <1 3 Calcium ppm ASTM D5185m 0 0 0 0 Phosphorus ppm ASTM D5185m 0 0 0 0 Zinc ppm ASTM D5185m 0 0 0 0 Sulfur ppm ASTM D5185m 23500 13272 17003 13562 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m 225 0 1 0 Sodium ppm ASTM D5185m 1 0 <1 0 Sodium ppm ASTM D5185m 20 0 0 0 0 Vater % ASTM D6185m >20 0 0 0 0 0 Water % ASTM D6304 >500	Barium	ppm	ASTM D5185m	90	0	0	0
Magnesium ppm ASTM D5185m 100 0 <1	Molybdenum	ppm	ASTM D5185m	0	0	0	0
Calcium ppm ASTM D5185m 0 0 0 0 0 Phosphorus ppm ASTM D5185m 0 0 10 <1 Zinc ppm ASTM D5185m 0 0 0 0 Sulfur ppm ASTM D5185m 23500 13272 17003 13562 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 0 1 0 Sodium ppm ASTM D5185m >20 0 0 0 Potassium ppm ASTM D5185m >20 0 0 0 Water % ASTM D5185m >20 0 0 0 Water % ASTM D5185m >20 0 0 0 Water % ASTM D6304 >50.0 50 ▲ 2010 0.00 FLUID CLEANLINESS method limit/base current </th <th>Manganese</th> <th>ppm</th> <th>ASTM D5185m</th> <th></th> <th>0</th> <th>0</th> <th>0</th>	Manganese	ppm	ASTM D5185m		0	0	0
Phosphorus ppm ASTM D5185m 0 0 10 <1	Magnesium	ppm	ASTM D5185m	100	0	<1	3
Zinc ppm ASTM D5185m 0 0 0 0 Sulfur ppm ASTM D5185m 23500 13272 17003 13562 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 0 1 0 Sodium ppm ASTM D5185m >20 0 0 0 Potassium ppm ASTM D5185m >20 0 0 0 Water % ASTM D5185m >20 0 0 0 Water % ASTM D5185m >20 0 0 0 Water % ASTM D6304 >0.05 0.005 0.005 0.201 0.00 Particles >4µm ASTM D6304 >500 50 0 2010 0.00 Particles >4µm ASTM D7647 >1300 418 Particles >21µm ASTM D7647 >20	Calcium	ppm	ASTM D5185m	0	0	0	0
Sulfur ppm ASTM D5185m 23500 13272 17003 13562 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 0 1 0 Sodium ppm ASTM D5185m >20 0 0 <1 Potassium ppm ASTM D5185m >20 0 0 0 Water % ASTM D6304 >0.05 0.005 0.201 0.00 ppm Water ppm ASTM D6304 >500 50 0.201 0.00 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >1300 418 Particles >21µm ASTM D7647 >80 29 Particles >21µm ASTM D7647 >4 0 Particles >71µm ASTM D7647 >3 0 <th>Phosphorus</th> <th>ppm</th> <th>ASTM D5185m</th> <th>0</th> <th>0</th> <th>10</th> <th><1</th>	Phosphorus	ppm	ASTM D5185m	0	0	10	<1
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 0 1 0 Sodium ppm ASTM D5185m >20 0 0 <1 Potassium ppm ASTM D5185m >20 0 0 0 Water % ASTM D6304 >0.05 0.005 △ 0.201 0.00 ppm Water ppm ASTM D6304 >500 50 △ 2010 0.00 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >1300 418 Particles >21μm ASTM D7647 >80 29 Particles >21μm ASTM D7647 >4 0 Particles >71μm ASTM D7647 >3 0 Particles >71μm ASTM D7647 >3 0	Zinc	ppm	ASTM D5185m	0	0	0	0
Silicon ppm ASTM D5185m >25 0 1 0 Sodium ppm ASTM D5185m 1 0 <1	Sulfur	ppm	ASTM D5185m	23500	13272	17003	13562
Sodium ppm ASTM D5185m 1 0 <1	CONTAMINANTS		method	limit/base	current	history1	history2
Sodium ppm ASTM D5185m 1 0 <1	Silicon	mqq	ASTM D5185m	>25	0	1	0
Potassium ppm ASTM D5185m >20 0 0 0 Water % ASTM D6304 >0.05 0.005 △ 0.201 0.00 ppm Water ppm ASTM D6304 >500 50 △ 2010 0.00 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >1300 418 Particles >14μm ASTM D7647 >80 29 Particles >21μm ASTM D7647 >20 7 Particles >38μm ASTM D7647 >4 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >/17/13 18/16/12 FLUID DEGRADATION method limit/base current history1 history2	Sodium		ASTM D5185m		1	0	<1
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ppm Water ppm ASTM D6304 >500 50 ▲ 2010 0.00 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 1519 Particles >6μm ASTM D7647 >1300 418 Particles >14μm ASTM D7647 >80 29 Particles >21μm ASTM D7647 >20 7 Particles >38μm ASTM D7647 >4 0 Particles >71μm ASTM D7647 >3 0 Poil Cleanliness ISO 4406 (c) >/17/13 18/16/12 FLUID DEGRADATION method limit/base current history1 history2	Water		ASTM D6304	>0.05	0.005	▲ 0.201	0.00
Particles >4μm ASTM D7647 1519 Particles >6μm ASTM D7647 >1300 418 Particles >14μm ASTM D7647 >80 29 Particles >21μm ASTM D7647 >20 7 Particles >38μm ASTM D7647 >4 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >/17/13 18/16/12 FLUID DEGRADATION method limit/base current history1 history2	ppm Water			>500			
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Particles >14μm ASTM D7647 >80 29 Particles >21μm ASTM D7647 >20 7 Particles >38μm ASTM D7647 >4 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >/17/13 18/16/12 FLUID DEGRADATION method limit/base current history1 history2	Particles >4µm		ASTM D7647		1519		
Particles >21μm ASTM D7647 >20 7 Particles >38μm ASTM D7647 >4 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >/17/13 18/16/12 FLUID DEGRADATION method limit/base current history1 history2	Particles >6µm		ASTM D7647	>1300	418		
Particles >38μm ASTM D7647 >4 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >/17/13 18/16/12 FLUID DEGRADATION method limit/base current history1 history2	Particles >14µm		ASTM D7647	>80	29		
Particles >38μm ASTM D7647 >4 0 Particles >71μm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >/17/13 18/16/12 FLUID DEGRADATION method limit/base current history1 history2	Particles >21µm		ASTM D7647	>20	7		
Particles >71µm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >/17/13 18/16/12 FLUID DEGRADATION method limit/base current history1 history2	Particles >38µm		ASTM D7647	>4	0		
Oil Cleanliness ISO 4406 (c) >/17/13 18/16/12 FLUID DEGRADATION method limit/base current history1 history2	Particles >71µm			>3	0		
	Oil Cleanliness				18/16/12		
	FLUID DEGRADA	TION _	method_	limit/base	current	history1	history2
	Acid Number (AN)		ASTM D8045	1.0	0.50	· ·	· ·



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