

OIL ANALYSIS REPORT

Sample Rating Trend ISO

KAESER 7582118 (S/N 1010)

Compressor

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

Recommendation

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of particulates present 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							
SAMPLE INFORMATION method limit/base current history1 history2				Jan 2022	Dec2022		
Sample Number Client Info CPA010419 KC91705	CAMBLE INFORM	AATION.	mathad			historya	history?
Sample Date Client Info 29 Dec 2023 07 Jan 2022		MATION		iiiiiivbase			HISTORYZ
Machine Age hrs Client Info Oil Changed Client Info N/A Changed Sample Status							
Dil Age	·						
Cilient Info N/A Changed College C							
MEAR METALS	-	hrs			-		
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 0 <1 Chromium ppm ASTM D5185m >10 0 0 Nickel ppm ASTM D5185m >3 0 0 Silver ppm ASTM D5185m >3 0 0 Aluminum ppm ASTM D5185m >2 0 <1 Aluminum ppm ASTM D5185m >10 0 0 Apper p ASTM D5185m 0 0 0 Apper p ASTM D5185m 0 0 0 </th <th>-</th> <th></th> <th>Client Info</th> <th></th> <th></th> <th></th> <th></th>	-		Client Info				
Chromium ppm ASTM D5185m >50 0 <1	Sample Status				ATTENTION	NORMAL	
Chromium ppm ASTM D5185m >10 0 0	WEAR METALS		method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m >3 0 0 0 Titanium ppm ASTM D5185m >3 0 0 0 Silver ppm ASTM D5185m >2 0 <1 Aluminum ppm ASTM D5185m >10 2 <1 Lead ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >10 <1 1 Antimony ppm ASTM D5185m >10 <1 1 Antimony ppm ASTM D5185m 0 0 0 0 Cadmium 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 Molybdenum ppm ASTM D5185m 0 0 0 Manganese ppm ASTM D5185m 0 0 0 Manganese ppm ASTM D5185m 0 0 0 Calcium ppm ASTM D5185m 0 0 0 Calcium ppm ASTM D5185m 1 16 Calcium ppm ASTM D5185m 1 16 Sulfur ppm ASTM D5185m 1 10 Sulfur ppm ASTM D5185m 1 10 CONTAMINANTS method limit/base current history1 history2 CONTAMINANTS 1 1 1 1 Sulfur ppm ASTM D5185m 1 1 10 Sulfur ppm ASTM D5185m 1 1 10 Potassium ppm ASTM D5185m 2 2 2 3 3 Potassium ppm ASTM D5185m 1 1 10 Sulfur ppm ASTM D5185m 1 1 10 Sulfur ppm ASTM D5185m 2 2 2 7 7 Water % ASTM D5185m 2 2 2 7 7 Water % ASTM D5185m 2 2 2 7 7 Water % ASTM D5185m 2 2 2 7 7 Water % ASTM D5185m 2 2 2 7 7 Water % ASTM D5185m 2 2 2 7 7 Water % ASTM D5185m 2 2 2 7 7 Water % ASTM D5185m 2 2 2 7 7 Water % ASTM D5185m 2 2 2 7 7 Water % ASTM D5185m 2 2 2 7 7 Water % ASTM D5185m 2 2 2 7 7 Water % ASTM D5185m 2 2 2 7 7 Water % ASTM D5185m 2 2 2 7 7 Water % ASTM D5185m 2 2 2 7 7 Water % ASTM D5185m 2 2 2 7 7 Water % ASTM D5185m 2 2 2 7 7 Particles > 1 1 1 1 Sodium Ppm ASTM D5185m 2 2 2 2 7 7 Water % ASTM D5185m 2 2 2 2 7 7 Water % ASTM D5185m 2 2 2 2 7 7 Water % ASTM D5185m 3 2 0 0 0 0 Particles > 1 1 1 1 1 Sodium 3 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Iron	ppm	ASTM D5185m	>50	0	<1	
Titanium	Chromium	ppm	ASTM D5185m	>10	0	0	
Silver	Nickel	ppm	ASTM D5185m	>3	0	0	
Aluminum	Titanium	ppm	ASTM D5185m	>3	0	0	
Lead ppm ASTM D5185m >10 0 0 Copper ppm ASTM D5185m >50 1 2 Tin ppm ASTM D5185m >50 1 2 Antimony ppm ASTM D5185m 0 0 Vanadium ppm ASTM D5185m 0 0 Cadmium ppm ASTM D5185m 0 0 Boron ppm ASTM D5185m 0 0 Berium ppm ASTM D5185m 0 0 Molybdenum ppm ASTM D5185m 0 0 Magnesium ppm ASTM D5185m <1 <1 Magnesium ppm ASTM D5185m <1 1 Calcium ppm ASTM D5185m <1 16 Zinc ppm ASTM D5185m <1 1	Silver	ppm	ASTM D5185m	>2	0	<1	
Copper ppm ASTM D5185m >50 1 2 ···· Tin ppm ASTM D5185m 0 ···· Antimony ppm ASTM D5185m 0 0 ···· Vanadium ppm ASTM D5185m 0 0 ···· Cadmium ppm ASTM D5185m 0 0 ···· Cadmium ppm ASTM D5185m 0 0 ···· Barium ppm ASTM D5185m 0 0 ···· Molybdenum ppm ASTM D5185m 0 0 ···· Magnesium ppm ASTM D5185m 0 0 ···· Magnesium ppm ASTM D5185m <1 <1 ···· Calcium ppm ASTM D5185m <1 16 ···· Zinc ppm ASTM D5185m <1 16 ···· Sulfur ppm ASTM D5185m <1 1 ····	Aluminum	ppm	ASTM D5185m	>10	2	<1	
Tin ppm ASTM D5185m >10 <1 <1 · Antimony ppm ASTM D5185m >0 0 0 · OCAdmium ppm ASTM D5185m 0 0 0 0 · OCAdmium ppm ASTM D5185m 0 0 0 · OCAdmium ppm ASTM D5185m 0 0 0 · OCAdmium ppm ASTM D5185m 0 0 0 · OCAMDITIVES	Lead	ppm	ASTM D5185m	>10	0	0	
Antimony ppm ASTM D5185m 0 Vanadium ppm ASTM D5185m 0 0 Cadmium ppm ASTM D5185m 0 0 Boron ppm ASTM D5185m 0 0 Barium ppm ASTM D5185m 90 0 0 Molybdenum ppm ASTM D5185m 90 0 0 Manganese ppm ASTM D5185m 90 44 78 Magnesium ppm ASTM D5185m 90 44 78 Calcium ppm ASTM D5185m 90 44 78 Zinc ppm ASTM D5185m 2 2 3 Phosphorus ppm ASTM D5185m 41 1 Zinc ppm ASTM D5185m 41 1 Sulfur ppm ASTM D51	Copper	ppm	ASTM D5185m	>50	1	2	
Vanadium ppm ASTM D5185m 0 0 Cadmium ppm ASTM D5185m 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 Barium ppm ASTM D5185m 90 0 0 Molybdenum ppm ASTM D5185m 0 0 Manganese ppm ASTM D5185m <1	Tin	ppm		>10	<1		
Cadmium ppm ASTM D5185m 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 Barium ppm ASTM D5185m 90 0 0 Molybdenum ppm ASTM D5185m 0 0 Manganesium ppm ASTM D5185m 90 44 78 <	Antimony	ppm	ASTM D5185m			0	
ADDITIVES	Vanadium	ppm	ASTM D5185m		0	0	
Boron ppm ASTM D5185m 90 0 0 Barium ppm ASTM D5185m 90 0 0 Molybdenum ppm ASTM D5185m 0 0 0 Manganese ppm ASTM D5185m 0 0 0 Magnesium ppm ASTM D5185m 2 1 Calcium ppm ASTM D5185m 2 2 3 Phosphorus ppm ASTM D5185m 2 1 16 Phosphorus ppm ASTM D5185m 41 1 Sulfur ppm ASTM D5185m 41 1 1 Sulfur ppm ASTM D5185m 18202 16932 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m 15 11 Potassium ppm ASTM D5185m >20 22 7 Water 9% ASTM D5185m >20 22 7 Water 9% ASTM D6304 >0.05 0.010 0.011 ppm Water ppm ASTM D6304 >500 104 113.2 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 6799 6707 Particles >6μm ASTM D7647 >1300 1416 1099 Particles >21μm ASTM D7647 >80 193 27 Particles >21μm ASTM D7647 >80 193 27 Particles >21μm ASTM D7647 >20 116 6 Particles >38μm ASTM D7647 >3 0 0 Particles >71μm ASTM D7647 >3 0 0 Particles >71μm ASTM D7647 >3 0 0 ISO 4406 (c) >/17/13 12 20/18/14 17/12	Cadmium	ppm	ASTM D5185m		0	0	
Barium ppm ASTM D5185m 90 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 0 0 Manganese ppm ASTM D5185m <1 <1 Magnesium ppm ASTM D5185m 90 44 78 Calcium ppm ASTM D5185m 2 2 3 Phosphorus ppm ASTM D5185m <1 16 Zinc ppm ASTM D5185m 41 1 Sulfur ppm ASTM D5185m 18202 16932 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1 1 Sodium ppm ASTM D5185m >20 22 7 Potassium ppm ASTM D5185m >20 22 7 Water % ASTM D6185m >20 22 7 Water	Boron	ppm	ASTM D5185m		0	0	
Manganese ppm ASTM D5185m <1	Barium	ppm	ASTM D5185m	90	0	0	
Magnesium ppm ASTM D5185m 90 44 78 Calcium ppm ASTM D5185m 2 2 3 Phosphorus ppm ASTM D5185m <1 16 Zinc ppm ASTM D5185m 41 1 Sulfur ppm ASTM D5185m 18202 16932 Sulfur ppm ASTM D5185m 18202 16932 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1 1 Sodium ppm ASTM D5185m >20 22 7 Potassium ppm ASTM D5185m >20 22 7 Water % ASTM D6185m >20 22 7 Water % ASTM D6304 >0.010 0.011 particles >	Molybdenum	ppm	ASTM D5185m		0	0	
Calcium ppm ASTM D5185m 2 2 3 Phosphorus ppm ASTM D5185m <1 16 Zinc ppm ASTM D5185m 41 1 Sulfur ppm ASTM D5185m 18202 16932 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1 1 Sodium ppm ASTM D5185m >20 22 7 Potassium ppm ASTM D5185m >20 22 7 Water % ASTM D5185m >20 22 7 Water % ASTM D6304 >0.05 0.010 0.011 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647	Manganese	ppm	ASTM D5185m		<1	<1	
Phosphorus ppm ASTM D5185m <1	Magnesium	ppm	ASTM D5185m	90	44	78	
Zinc ppm ASTM D5185m 41 1 1 Sulfur ppm ASTM D5185m 18202 16932 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1 1 Sodium ppm ASTM D5185m >25 <1 1 Potassium ppm ASTM D5185m >20 22 7 Water % ASTM D6304 >0.05 0.010 0.011 ppm Water ppm ASTM D6304 >500 104 113.2 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 6799 6707 Particles >6μm ASTM D7647 >1300 1416 1099 Particles >14μm ASTM D7647 >80 93 27 Particles >21μm ASTM D7647 >20 21 6 Particles >38μm ASTM D7647 >4 0 0 Particles >71μm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 20/18/14 17/12	Calcium	ppm	ASTM D5185m	2	2	3	
Sulfur ppm ASTM D5185m 18202 16932 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1 1 Sodium ppm ASTM D5185m >20 22 7 Potassium ppm ASTM D5185m >20 22 7 Water % ASTM D5185m >20 0.010 0.011 ppm Water % ASTM D6304 >0.05 0.010 0.011 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >80 4	Phosphorus	ppm	ASTM D5185m		<1	16	
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1 1 Sodium ppm ASTM D5185m >20 22 7 Potassium ppm ASTM D5185m >20 22 7 Water % ASTM D6304 >0.05 0.010 0.011 ppm Water ppm ASTM D6304 >500 104 113.2 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >1300 ▲ 1416 1099 Particles >6μm ASTM D7647 >80 ▲ 93 27 Particles >21μm ASTM D7647 >20 ▲ 21 6 Particles >71μm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 20/18/14 1	Zinc	ppm	ASTM D5185m		41	1	
Silicon ppm ASTM D5185m >25 <1 1	Sulfur	ppm	ASTM D5185m		18202	16932	
Sodium ppm ASTM D5185m 15 11 Potassium ppm ASTM D5185m >20 22 7 Water % ASTM D6304 >0.05 0.010 0.011 ppm Water ppm ASTM D6304 >500 104 113.2 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >1300 ▲ 1416 1099 Particles >6μm ASTM D7647 >80 ▲ 93 27 Particles >21μm ASTM D7647 >20 ▲ 21 6 Particles >38μm ASTM D7647 >4 0 0 Particles >71μm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 Δ 20/18/14 17/12	CONTAMINANTS	;	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 22 7 Water % ASTM D6304 >0.05 0.010 0.011 ppm Water ppm ASTM D6304 >500 104 113.2 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 6799 6707 Particles >6μm ASTM D7647 >1300 1416 1099 Particles >14μm ASTM D7647 >80 93 27 Particles >21μm ASTM D7647 >20 21 6 Particles >38μm ASTM D7647 >3 0 0 Particles >71μm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 20/18/14 17/12	Silicon	ppm	ASTM D5185m	>25	<1	1	
Water % ASTM D6304 >0.05 0.010 0.011 ppm Water ppm ASTM D6304 >500 104 113.2 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 6799 6707 Particles >6μm ASTM D7647 >1300 1416 1099 Particles >14μm ASTM D7647 >80 93 27 Particles >21μm ASTM D7647 >20 21 6 Particles >38μm ASTM D7647 >3 0 0 Particles >71μm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 20/18/14 17/12	Sodium	ppm	ASTM D5185m		15	11	
ppm Water ppm ASTM D6304 >500 104 113.2 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 6799 6707 Particles >6μm ASTM D7647 >1300 1416 1099 Particles >14μm ASTM D7647 >80 93 27 Particles >21μm ASTM D7647 >20 21 6 Particles >38μm ASTM D7647 >4 0 0 Particles >71μm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 20/18/14 17/12	Potassium	ppm	ASTM D5185m	>20	22	7	
FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 6799 6707 Particles >6μm ASTM D7647 >1300 1416 1099 Particles >14μm ASTM D7647 >80 93 27 Particles >21μm ASTM D7647 >20 21 6 Particles >38μm ASTM D7647 >4 0 0 Particles >71μm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 20/18/14 17/12	Water	%	ASTM D6304	>0.05	0.010	0.011	
Particles >4μm ASTM D7647 6799 6707 Particles >6μm ASTM D7647 >1300 1416 1099 Particles >14μm ASTM D7647 >80 93 27 Particles >21μm ASTM D7647 >20 21 6 Particles >38μm ASTM D7647 >4 0 0 Particles >71μm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 20/18/14 17/12	ppm Water	ppm	ASTM D6304	>500	104	113.2	
Particles >6μm ASTM D7647 >1300 ▲ 1416 1099 Particles >14μm ASTM D7647 >80 ▲ 93 27 Particles >21μm ASTM D7647 >20 ▲ 21 6 Particles >38μm ASTM D7647 >4 0 0 Particles >71μm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 20/18/14 17/12	FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >14μm ASTM D7647 >80 ▲ 93 27 Particles >21μm ASTM D7647 >20 ▲ 21 6 Particles >38μm ASTM D7647 >4 0 0 Particles >71μm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 20/18/14 17/12	Particles >4µm		ASTM D7647		6799	6707	
Particles >21μm ASTM D7647 >20 ▲ 21 6 Particles >38μm ASTM D7647 >4 0 0 Particles >71μm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 20/18/14 17/12	Particles >6µm		ASTM D7647	>1300	1416	1099	
Particles >38μm ASTM D7647 >4 0 0 Particles >71μm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 Δ 20/18/14 17/12	Particles >14µm		ASTM D7647	>80	93	27	
Particles >71μm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 20/18/14 17/12	Particles >21µm		ASTM D7647	>20	▲ 21	6	
Oil Cleanliness ISO 4406 (c) >/17/13 A 20/18/14 17/12	Particles >38μm		ASTM D7647	>4	0	0	
()	Particles >71μm		ASTM D7647	>3	0	0	
FLUID DEGRADATION method limit/base current history1 history2	Oil Cleanliness		ISO 4406 (c)	>/17/13	20/18/14	17/12	
	FLUID DEGRADA	NOITA	method	limit/base	current	history1	history2

Acid Number (AN)

mg KOH/g ASTM D8045 0.4

0.34 0.350

Contact/Location: Service Manager - CERQUA



OIL ANALYSIS REPORT

