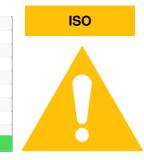


OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

8383713 (S/N 1440)

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

DIAGNOSIS

A Recommendation

Oil and 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 high amount of particulates present in the oil.

Fluid Condition

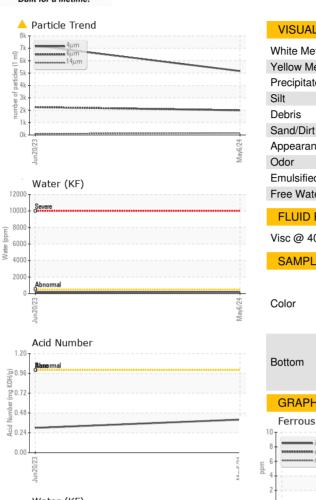
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

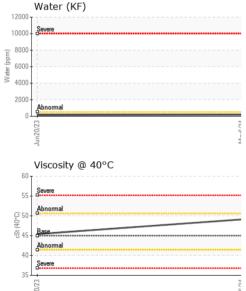
Sample Date Client Info 06 May 2024 20 Jun 2023 Machine Age hrs Client Info 8341 6316 Oil Age hrs Client Info 7000 0 Sample Status Client Info 7000 0 WEAR METALS method Imil/base current history1 history2 fron ppm ASTM 05185m >3 0 0 Nickel ppm ASTM 05185m >3 0 0 Nickel ppm ASTM 05185m >10 <1 0 Silver ppm ASTM 05185m >10 <1 0 Cadmium ppm ASTM 05185m >10 <1 0 Vanadium ppm ASTM 05185m 0 <1 0 Addimium ppm ASTM 05185m 0 <1 0	SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 8341 6316 Oil Age hrs Client Info 7000 0 Sample Status Client Info Changed N/A WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 0 0 Nickel ppm ASTM D5185m >10 <1	Sample Number		Client Info		KCPA017314	KCP002259	
Oil Age hrs Client Info 7000 0 Oil Changed Client Info Changed N/A Sample Status Imit base current history1 history2 Iron ppm ASTM 05185m >50 0 0 Nickel ppm ASTM 05185m >3 0 0 Nickel ppm ASTM 05185m >3 1 0 Silver ppm ASTM 05185m >10 2 2 Aluminum ppm ASTM 05185m >10 2 2 Aluminum ppm ASTM 05185m >10 <1	Sample Date		Client Info		06 May 2024	20 Jun 2023	
Oil Changed Client Info Changed N/A Sample Status method limit/base current history1 history2 WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5165m >50 0 0 Nickel ppm ASTM D5165m >3 0 0 Silver ppm ASTM D5165m >3 1 0 Aluminum ppm ASTM D5165m >10 2 2 Aluminum ppm ASTM D5165m >10 2 1 0 Cadmium ppm ASTM D5165m >10 1 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 Maganesium ppm ASTM D5185m 0 5	Machine Age	hrs	Client Info		8341	6316	
Sample Status method Imit/base current history1 history2 Iron ppm ASTM D5185n >50 0 0 Nickel ppm ASTM D5185n >3 0 0 Nickel ppm ASTM D5185n >3 0 0 Silver ppm ASTM D5185n >3 0 0 Aluminum ppm ASTM D5185n >10 2 2 Aluminum ppm ASTM D5185n >10 1 0 Copper ppm ASTM D5185n >10 -1 0 Admium ppm ASTM D5185n >10 -1 0 Admium ppm ASTM D5185n 0 0 0 Admium ppm ASTM D5185n 0 0 Admium ppm ASTM D5185n 0 5 0 </td <td>Oil Age</td> <td>hrs</td> <td>Client Info</td> <td></td> <th>7000</th> <td>0</td> <td></td>	Oil Age	hrs	Client Info		7000	0	
WEAR METALS method limit/base current history1 history2 tron ppm ASTM D5185m >50 0 0 Chromium ppm ASTM D5185m >3 0 0 Nickel ppm ASTM D5185m >3 0 0 Silver ppm ASTM D5185m >2 0 0 Auminum ppm ASTM D5185m >10 2 2 Auminum ppm ASTM D5185m >10 21 0 Copper ppm ASTM D5185m >10 4 10 Cadmium ppm ASTM D5185m >10 4 0 ADDITIVES method limit/base current history1 history1 history1 Manganese ppm ASTM D5185m 0 0 Molybdenum ppm ASTM D5185m	Oil Changed		Client Info		Changed	N/A	
ron ppm ASTM D5185m >50 0 0 Nickel ppm ASTM D5185m >3 0 0 Nickel ppm ASTM D5185m >3 0 0 Silver ppm ASTM D5185m >2 0 0 Aluminum ppm ASTM D5185m >10 2 2 Aduminum ppm ASTM D5185m >10 <1	Sample Status				ABNORMAL	ATTENTION	
Chromium ppm ASTM D5185m >10 <1 0 Nickel ppm ASTM D5185m >3 0 0 Silver ppm ASTM D5185m >2 0 0 Aduminum ppm ASTM D5185m >10 2 2 Aduminum ppm ASTM D5185m >10 <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m >3 0 0 Titanium ppm ASTM D5185m >3 <1	Iron	ppm	ASTM D5185m	>50	0	0	
Titanium ppm ASTM D5185m >3 <1 0 Silver ppm ASTM D5185m >2 0 0 Aluminum ppm ASTM D5185m >10 2 2 Aluminum ppm ASTM D5185m >10 <1	Chromium	ppm	ASTM D5185m	>10	<1	0	
Titanium ppm ASTM D5185m >3 <1 0 Silver ppm ASTM D5185m >2 0 0 Aluminum ppm ASTM D5185m >10 2 2 Lead ppm ASTM D5185m >10 <1	Nickel	maa	ASTM D5185m	>3	0	0	
Silver ppm ASTM D5185m >2 0 0 Aluminum ppm ASTM D5185m >10 2 2 Aluminum ppm ASTM D5185m >10 <1	Titanium		ASTM D5185m	>3	<1	0	
Atuminum ppm ASTM D5185m >10 2 2 Lead ppm ASTM D5185m >10 <1							
Lead ppm ASTM D5185m >10 <1 0 Copper ppm ASTM D5185m >50 4 10 Vanadium ppm ASTM D5185m >10 <1							
Copper ppm ASTM D5185m >50 4 10 Tin ppm ASTM D5185m >10 <1					_		
Tin ppm ASTM D5185m >10 <1 0 Vanadium ppm ASTM D5185m <1							
Vanadium ppm ASTM D5185m <1 0 Cadmium ppm ASTM D5185m <1					-		
Cadmium ppm ASTM D5185m <1 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 90 44 23 Maganese ppm ASTM D5185m 0 <1 0 Magnese ppm ASTM D5185m 0 <1 0 Calcium ppm ASTM D5185m 0 5 0 Calcium ppm ASTM D5185m 0 5 0 Sulfur ppm ASTM D5185m 0 5 0 Sodium ppm ASTM D5185m 23500 22932 16718 Sodium ppm ASTM D5185m >25 <1 0 Sodium ppm ASTM D5185m >20 <t< td=""><td></td><td></td><td></td><td>>10</td><th></th><td></td><td></td></t<>				>10			
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 Barium ppm ASTM D5185m 90 44 23 Molybdenum ppm ASTM D5185m 0 <1							
Boron ppm ASTM D5185m 0 0 0 Barium ppm ASTM D5185m 90 44 23 Molybdenum ppm ASTM D5185m 0 <1	Cadmium	ppm	ASTM D5185m		<1	0	
Barium ppm ASTM D5185m 90 44 23 Molybdenum ppm ASTM D5185m 0 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 0 <1	Boron	ppm	ASTM D5185m	0	0	0	
Manganese ppm ASTM D5185m 0 0 Magnesium ppm ASTM D5185m 100 80 29 Calcium ppm ASTM D5185m 0 5 0 Phosphorus ppm ASTM D5185m 0 5 0 Zinc ppm ASTM D5185m 0 8 8 Sulfur ppm ASTM D5185m 23500 22932 16718 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1	Barium	ppm	ASTM D5185m	90	44	23	
Magnesium ppm ASTM D5185m 100 80 29 Calcium ppm ASTM D5185m 0 5 0 Phosphorus ppm ASTM D5185m 0 5 0 Zinc ppm ASTM D5185m 0 8 8 Sulfur ppm ASTM D5185m 23500 22932 16718 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1	Volybdenum	ppm	ASTM D5185m	0	<1	0	
Calcium ppm ASTM D5185m 0 Phosphorus ppm ASTM D5185m 0 5 0 Zinc ppm ASTM D5185m 0 8 8 Sulfur ppm ASTM D5185m 23500 22932 16718 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1	Vanganese	ppm	ASTM D5185m		0	0	
Phosphorus ppm ASTM D5185m 0 5 0 Zinc ppm ASTM D5185m 0 8 8 Sulfur ppm ASTM D5185m 23500 22932 16718 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1	Magnesium	ppm	ASTM D5185m	100	80	29	
Zinc ppm ASTM D5185m 0 8 8 Sulfur ppm ASTM D5185m 23500 22932 16718 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1 0 Sodium ppm ASTM D5185m >25 <1 0 Sodium ppm ASTM D5185m >20 12 9 Sodium ppm ASTM D5185m >20 12 9 Potassium ppm ASTM D6304 >0.05 0.019 0.015 Water % ASTM D6304 >500 191 150.4 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >1300 1991 2247 Particles >6µm ASTM D7647 >80 164 101 Particles >1µm ASTM D7647 >20 <t< td=""><td>Calcium</td><td>ppm</td><td>ASTM D5185m</td><td>0</td><th>5</th><td>0</td><td></td></t<>	Calcium	ppm	ASTM D5185m	0	5	0	
Zinc ppm ASTM D5185m 0 8 8 Sulfur ppm ASTM D5185m 23500 22932 16718 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1	Phosphorus	ppm	ASTM D5185m	0	5	0	
Sulfur ppm ASTM D5185m 23500 22932 16718 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1			ASTM D5185m	0	8	8	
Silicon ppm ASTM D5185m >25 <1 0 Sodium ppm ASTM D5185m 8 12 Potassium ppm ASTM D5185m >20 12 9 Water % ASTM D6304 >0.05 0.019 0.015 Water % ASTM D6304 >500 191 150.4 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 5161 7203 Particles >6µm ASTM D7647 >1300 1991 2247 Particles >6µm ASTM D7647 >20 24 16 Particles >1µm ASTM D7647 >20 24 16 Particles >21µm ASTM D7647 >3 0 0 1 Particles >71µm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 20/18/15 20/18/14	Sulfur				22932	16718	
Sodium ppm ASTM D5185m 8 12 Potassium ppm ASTM D5185m >20 12 9 Water % ASTM D5185m >20 12 9 Water % ASTM D6304 >0.05 0.019 0.015 opm Water ppm ASTM D6304 >500 191 150.4 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 5161 7203 Particles >6µm ASTM D7647 >1300 1991 2247 Particles >14µm ASTM D7647 >80 164 101 Particles >21µm ASTM D7647 >20 24 16 Particles >38µm ASTM D7647 >3 0 0 Particles >71µm ASTM D7647 >3 0 0 Oil Cleanliness	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 12 9 Water % ASTM D6304 >0.05 0.019 0.015 opm Water ppm ASTM D6304 >500 191 150.4 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 5161 7203 Particles >6µm ASTM D7647 >1300 1991 2247 Particles >14µm ASTM D7647 >80 164 101 Particles >14µm ASTM D7647 >20 24 16 Particles >21µm ASTM D7647 >30 0 0 Particles >71µm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 20/18/15 20/18/14 FLUID DEGRADATION method limit/base current history1	Silicon	ppm	ASTM D5185m	>25	<1	0	
Water % ASTM D6304 >0.05 0.019 0.015 opm Water ppm ASTM D6304 >500 191 150.4 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 5161 7203 Particles >6µm ASTM D7647 5161 7203 Particles >6µm ASTM D7647 >1300 1991 2247 Particles >14µm ASTM D7647 >80 164 101 Particles >21µm ASTM D7647 >20 24 16 Particles >38µm ASTM D7647 >3 0 0 Particles >71µm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 20/18/15 20/18/14	Sodium	ppm	ASTM D5185m		8	12	
Water % ASTM D6304 >0.05 0.019 0.015 opm Water ppm ASTM D6304 >500 191 150.4 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 5161 7203 Particles >6µm ASTM D7647 >1300 1991 2247 Particles >14µm ASTM D7647 >80 164 101 Particles >21µm ASTM D7647 >20 24 16 Particles >38µm ASTM D7647 >4 0 1 Particles >71µm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 20/18/15 20/18/14	Potassium	ppm	ASTM D5185m	>20	12	9	
oppm Water ppm ASTM D6304 >500 191 150.4 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 5161 7203 Particles >6µm ASTM D7647 >1300 1991 2247 Particles >6µm ASTM D7647 >80 164 101 Particles >1µm ASTM D7647 >20 24 16 Particles >21µm ASTM D7647 >4 0 1 Particles >38µm ASTM D7647 >4 0 1 Particles >71µm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) /17/13 20/18/15 20/18/14 FLUID DEGRADATION method limit/base current history1 history2	Water		ASTM D6304	>0.05	0.019	0.015	
Particles >4µm ASTM D7647 5161 7203 Particles >6µm ASTM D7647 >1300 1991 2247 Particles >14µm ASTM D7647 >80 164 101 Particles >14µm ASTM D7647 >20 24 16 Particles >21µm ASTM D7647 >20 24 16 Particles >38µm ASTM D7647 >4 0 1 Particles >38µm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 20/18/15 20/18/14 FLUID DEGRADATION method limit/base current history1 history2	opm Water	ppm	ASTM D6304	>500	191	150.4	
Particles >6µm ASTM D7647 >1300 1991 2247 Particles >14µm ASTM D7647 >80 ▲ 164 101 Particles >21µm ASTM D7647 >20 24 16 Particles >21µm ASTM D7647 >20 24 16 Particles >38µm ASTM D7647 >4 0 1 Particles >71µm ASTM D7647 >3 0 0 Dil Cleanliness ISO 4406 (c) >/17/13 20/18/15 20/18/14 FLUID DEGRADATION method limit/base current history1 history2	FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >14μm ASTM D7647 >80 ▲ 164 101 Particles >21μm ASTM D7647 >20 24 16 Particles >38μm ASTM D7647 >4 0 1 Particles >38μm ASTM D7647 >4 0 1 Particles >38μm ASTM D7647 >3 0 0 Particles >71μm ASTM D7647 >3 0 0 Dil Cleanliness ISO 4406 (c) >/17/13 ▲ 20/18/15 20/18/14 FLUID DEGRADATION method limit/base current history1 history2	Particles >4µm		ASTM D7647		5161	7203	
Particles >14µm ASTM D7647 >80 ▲ 164 101 Particles >21µm ASTM D7647 >20 24 16 Particles >38µm ASTM D7647 >4 0 1 Particles >38µm ASTM D7647 >3 0 0 Particles >71µm ASTM D7647 >3 0 0 Dil Cleanliness ISO 4406 (c) >/17/13 ▲ 20/18/15 20/18/14 FLUID DEGRADATION method limit/base current history1 history2	Particles >6µm		ASTM D7647	>1300	<u> </u>	2247	
Particles >21μm ASTM D7647 >20 24 16 Particles >38μm ASTM D7647 >4 0 1 Particles >38μm ASTM D7647 >3 0 0 Particles >71μm			ASTM D7647	>80	<u> </u>	0101	
Particles >38μm ASTM D7647 >4 0 1 Particles >71μm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 20/18/15 20/18/14 FLUID DEGRADATION method limit/base current history1 history2			ASTM D7647	>20	24	16	
Particles >71μm ASTM D7647 >3 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 20/18/15 ⊇0/18/14 FLUID DEGRADATION method limit/base current history1 history2							
Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 20/18/15 ● 20/18/14 FLUID DEGRADATION method limit/base current history1 history2							
					-		
	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
ACIC NUTIBER (AIV) INSTURING ASTM DOUGS I.U U.4U U.3U							
	Acia Number (AN)	nig r.OH/g	ASTIVI DOU45	1.0	0.40	0.30	



Built for a lifetime.

OIL ANALYSIS REPORT





VISUAL		method	limit/base	current	history1	history
White Metal	scalar	*Visual	NONE	NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE	
Silt	scalar	*Visual	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Appearance	scalar	*Visual	NORML	NORML	NORML	
Odor	scalar	*Visual	NORML	NORML	NORML	
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG	
Free Water	scalar	*Visual		NEG	NEG	
FLUID PROPER	TIES	method	limit/base	current	history1	history
Visc @ 40°C	cSt	ASTM D445	45	49.1	45.4	
SAMPLE IMAGE	S	method	limit/base	current	history1	history
Color						no imag
Bottom						no image
GRAPHS						
Ferrous Alloys				Particle Count		
10			491,520	ľ		
chromium			122,880	-		
			20.720			
2			30,720	1		
0			7,680			
Jun 20/23			May6/24 - (per 1 ml)			
unr			Ma les (pe			
Non-ferrous Meta	ls		pitted 480			
10 8 copper			42/9/24 480 480 150 170 170	+		
6 - 6 - sussessment lead		-			`\	
		Constant of the local division of the local	30	1		
2				Berevernal	\backslash	
0						
Jun20/23			May6/24	1		
			ž (4μ 6μ	14µ 21µ	38µ 7
Viscosity @ 40°C				Acid Number		
55 Severe			(B)HO D) 0.96	Basermal		
			Q 0.96	1		
(2) 50 - Base 정 45 - Chancel						
40 -			W B0.72			
Severe						
35			May6/24	Jun20/23		
35 B+++						

- Test Package : IND 2 (Additional Tests: KF, PrtCount) Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369.
- * Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Report Id: PLALAKWI [WUSCAR] 06177732 (Generated: 05/15/2024 21:38:42) Rev: 1

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