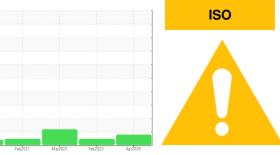


OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

6836564 (S/N 1308)

Component Compressor Fluid KAESER SIGMA (OEM) S-460 (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. 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 silt (particulates < 14 microns in size) present in the oil.

Fluid Condition

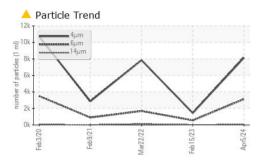
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

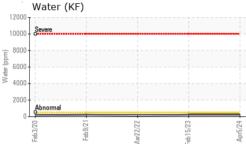
Machine Age hrs Client Info 7844 7335 6883 Oil Age hrs Client Info 1500 452 2241 Oil Changed Client Info Changed Changed Changed Changed Sample Status method limit/base current history1 history2 Iron ppm ASTM D5185m >50 0 0 0 Nickel ppm ASTM D5185m >3 0 0 0 Silver ppm ASTM D5185m >3 0 0 0 Silver ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >10 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 7844 7335 6883 Oil Age hrs Client Info 1500 452 2241 Oil Changed Sample Status Client Info Changed Changed <td>Sample Number</td> <td></td> <td>Client Info</td> <td></td> <th>KC130127</th> <td>KC101034</td> <td>KC97156</td>	Sample Number		Client Info		KC130127	KC101034	KC97156
Oil Age hrs Client Info 1500 452 2241 Oil Changed Client Info Changed Changed Changed Changed Changed Changed ATTENTION WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185n >50 0 0 <1	Sample Date		Client Info		05 Apr 2024	15 Feb 2023	22 Mar 2022
Oli Changed Sample Status Client Info Changed ABNORMAL Changed NORMAL Changed ATTENTION WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 0 0 <1	Machine Age	hrs	Client Info		7844	7335	6883
Sample Status method Imit/base current history1 ATTENTION WEAR METALS method limit/base current history1 history2 Iron ppm ASTM 05185m >50 0 0 0 Nickel ppm ASTM 05185m >3 0 0 0 Nickel ppm ASTM 05185m >3 0 0 0 Silver ppm ASTM 05185m >10 0 0 1 Lead ppm ASTM 05185m >10 0 0 <1	Oil Age	hrs	Client Info		1500	452	2241
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM 05185m >50 0 0 <1	Oil Changed		Client Info		Changed	Changed	Changed
Iron ppm ASTM D5185m >50 0 0 <1 Chromium ppm ASTM D5185m >3 0 0 0 Nickel ppm ASTM D5185m >3 0 0 0 Silver ppm ASTM D5185m >2 0 0 0 Auminum ppm ASTM D5185m >10 0 0 1 Lead ppm ASTM D5185m >10 0 0 <1	Sample Status				ABNORMAL	NORMAL	ATTENTION
Chromium ppm ASTM D5165m >10 0 0 0 Nickel ppm ASTM D5165m >3 0 0 0 Silver ppm ASTM D5165m >2 0 0 0 Astm D5165m >2 0 0 0 1 Lead ppm ASTM D5165m >10 0 0 <1 Lead ppm ASTM D5165m >10 0 0 <1 Lead ppm ASTM D5165m >10 0 0 <1 Antimony ppm ASTM D5165m >10 0 0 0 0 Antimony ppm ASTM D5165m 0 0 0 0 0 0 Additium ppm ASTM D5165m 0 <t< th=""><th>WEAR METALS</th><th></th><th>method</th><th>limit/base</th><th>current</th><th>history1</th><th>history2</th></t<>	WEAR METALS		method	limit/base	current	history1	history2
Chromium ppm ASTM D5185m >10 0 0 0 Nickel ppm ASTM D5185m >3 0 0 0 Silver ppm ASTM D5185m >2 0 0 0 Aduminum ppm ASTM D5185m >10 0 0 1 Lead ppm ASTM D5185m >10 0 0 <1	Iron	ppm	ASTM D5185m	>50	0	0	<1
Nickel ppm ASTM D5185m >3 0 0 0 Titanium ppm ASTM D5185m >3 0 0 0 Silver ppm ASTM D5185m >10 0 0 1 Lead ppm ASTM D5185m >10 0 0 <1	Chromium		ASTM D5185m	>10	0	0	0
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Aluminum ppm ASTM D5185m >10 0 0 1 Lead ppm ASTM D5185m >10 0 0 <1					0		
Lead ppm ASTM D5185m >10 0 0 <11 Copper ppm ASTM D5185m >50 2 4 7 Tin ppm ASTM D5185m >10 0 0 <1	Aluminum			>10	-		1
Copper ppm ASTM D5185m >50 2 4 7 Tin ppm ASTM D5185m >10 0 0 <1							
Tin ppm ASTM D5185m >10 0 0 <1 Antimony ppm ASTM D5185m 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 90 13 0 0 Molybdenum ppm ASTM D5185m 90 64 53 44 Calcium ppm ASTM D5185m 90 64 53 44 Calcium ppm ASTM D5185m 1 2 <1					-		
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Zinc ppm ASTM D5185m 0 3 5 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 0 0 0 Sodium ppm ASTM D5185m >25 0 0 0 Sodium ppm ASTM D5185m >20 3 4 5 Potassium ppm ASTM D5185m >20 3 4 5 Water % ASTM D6304 >0.05 0.022 0.022 0.014 ppm Water ppm ASTM D6304 >500 223 226.0 149.3 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >1300 3136 563 1691 Particles >14µm ASTM D7647 >80 45 27 127 Particles >21µm ASTM D7647 >20 9 6 45				2	-		÷
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 0 0 0 Sodium ppm ASTM D5185m >25 0 0 0 Potassium ppm ASTM D5185m >20 3 4 5 Water % ASTM D6304 >0.05 0.022 0.022 0.014 ppm Water ppm ASTM D6304 >500 223 226.0 149.3 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 8143 1444 7849 Particles >6µm ASTM D7647 >1300 3136 563 1691 Particles >14µm ASTM D7647 >80 45 27 127 Particles >21µm ASTM D7647 >20 9 6 45 Particles >38µm ASTM D7647 >3 0 0 0 0					-		
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Sodium ppm ASTM D5185m 25 28 19 Potassium ppm ASTM D5185m >20 3 4 5 Water % ASTM D6304 >0.05 0.022 0.022 0.014 ppm Water ppm ASTM D6304 >500 223 226.0 149.3 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 8143 1444 7849 7849 Particles >6µm ASTM D7647 >1300 3136 563 1691 Particles >14µm ASTM D7647 >80 45 27 127 Particles >21µm ASTM D7647 >20 9 6 45 Particles >38µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 20/19/13 18/16/12 18/14	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 3 4 5 Water % ASTM D6304 >0.05 0.022 0.022 0.014 ppm ASTM D6304 >500 223 226.0 149.3 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 8143 1444 7849 7849 Particles >6µm ASTM D7647 >1300 3136 563 1691 Particles >14µm ASTM D7647 >20 9 6 45 Particles >21µm ASTM D7647 >20 9 6 45 Particles >38µm ASTM D7647 >3 0 0 4 Particles >71µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 20/19/13 18/16/12 18/14 FLUID DEGRADATION method limit/base current history1 history2	Silicon	ppm	ASTM D5185m	>25	0	0	0
Water % ASTM D6304 >0.05 0.022 0.022 0.014 ppm Water ppm ASTM D6304 >500 223 226.0 149.3 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 8143 1444 7849 Particles >6µm ASTM D7647 >1300 3136 563 1691 Particles >14µm ASTM D7647 >80 45 27 127 Particles >21µm ASTM D7647 >20 9 6 45 Particles >38µm ASTM D7647 >3 0 0 0 Oli Cleanliness ISO 4406 (c) >-/17/13 20/19/13 18/16/12 18/14 FLUID DEGRADATION method limit/base current history1 history2	Sodium	ppm	ASTM D5185m		25	28	19
ppm Water ppm ASTM D6304 >500 223 226.0 149.3 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 8143 1444 7849 Particles >6µm ASTM D7647 >1300 3136 563 1691 Particles >14µm ASTM D7647 >80 45 27 127 Particles >21µm ASTM D7647 >20 9 6 45 Particles >38µm ASTM D7647 >4 0 0 4 Particles >71µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 20/19/13 18/16/12 18/14 FLUID DEGRADATION method limit/base current history1 history2		ppm	ASTM D5185m	>20	3	4	5
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Particles >4µm ASTM D7647 8143 1444 7849 Particles >6µm ASTM D7647 >1300 3136 563 1691 Particles >14µm ASTM D7647 >80 45 27 127 Particles >21µm ASTM D7647 >20 9 6 45 Particles >21µm ASTM D7647 >20 9 6 45 Particles >38µm ASTM D7647 >4 0 0 4 Particles >71µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 20/19/13 18/16/12 18/14	ppm Water	ppm	ASTM D6304	>500	223	226.0	149.3
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Particles >21µm ASTM D7647 >20 9 6 45 Particles >38µm ASTM D7647 >4 0 0 4 Particles >38µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 20/19/13 18/16/12 18/14 FLUID DEGRADATION method limit/base current history1 history2			ASTM D7647	>1300	<u> </u>	563	691
Particles >38μm ASTM D7647 >4 0 0 4 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 20/19/13 18/16/12 18/14 FLUID DEGRADATION method limit/base current history1 history2	Particles >14µm		ASTM D7647	>80	45	27	127
Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 20/19/13 18/16/12 18/14 FLUID DEGRADATION method limit/base current history1 history2	Particles >21µm		ASTM D7647	>20	9	6	4 5
Oil Cleanliness ISO 4406 (c) >/17/13 20/19/13 18/16/12 18/14 FLUID DEGRADATION method limit/base current history1 history2	Particles >38µm		ASTM D7647	>4	0	0	4
FLUID DEGRADATION method limit/base current history1 history2	Particles >71µm		ASTM D7647	>3	0	0	0
	Oil Cleanliness		ISO 4406 (c)	>/17/13	A 20/19/13	18/16/12	18/14
Acid Number (AN) mg KOH/g ASTM D8045 0.4 0.31 0.26 0.32	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
	Acid Number (AN)	mg KOH/g	ASTM D8045	0.4	0.31	0.26	0.32

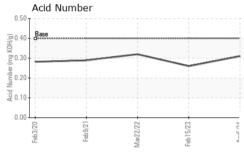
Contact/Location: Service Manager - SANGRESC Page 1 of 2

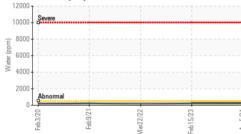
L L COMPRESSOR Built for a lifetime.

OIL ANALYSIS REPORT

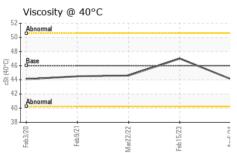






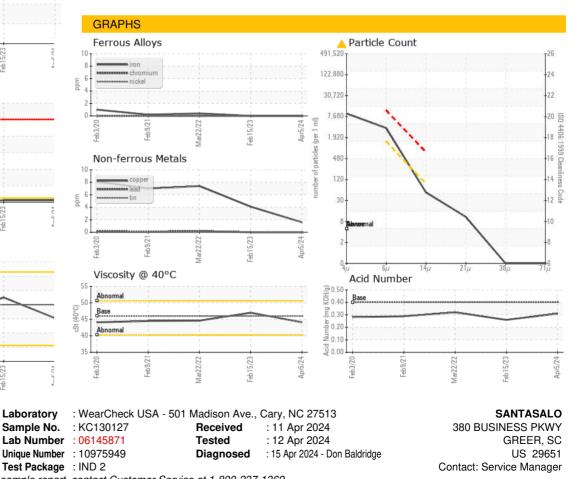


Water (KF)



VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46	44.1	47.0	44.6
SAMPLE IMAGES	;	method	limit/base	current	history1	history2
Color						
Bottom						

ottom



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)

T: F:

Certificate 12367

Contact/Location: Service Manager - SANGRESC