

## **OIL ANALYSIS REPORT**

### **VIS DEBRIS**



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

#### DIAGNOSIS

#### Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

#### Wear

All component wear rates are normal.

#### Contamination

Moderate concentration of visible dirt/debris present in the oil.

#### Fluid Condition

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

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		Dec2020 C	lct2021 Feb2022 Jun202	22 Feb2023 Jun2023 Nov2023	Mar2024	
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		KCPA016187	KCPA007681	KCPA003293
Sample Date		Client Info		18 Mar 2024	20 Nov 2023	20 Jun 2023
Machine Age	hrs	Client Info		19847	17258	14270
Oil Age	hrs	Client Info		2600	0	0
Oil Changed		Client Info		Changed	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	NORMAL
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	0	0	0
Chromium	ppm	ASTM D5185m	>10	0	0	0
Nickel	ppm	ASTM D5185m	>3	0	0	0
Titanium	ppm	ASTM D5185m	>3	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>10	<1	0	2
Lead	ppm	ASTM D5185m	>10	0	0	0
Copper	ppm	ASTM D5185m	>50	1	5	1
Tin	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
Barium	ppm	ASTM D5185m	90	54	0	6
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m	90	64	10	24
Calcium	ppm	ASTM D5185m	2	2	0	0
Phosphorus	ppm	ASTM D5185m		0	0	0
Zinc Sulfur	ppm	ASTM D5185m		0	14 18993	8 19345
	ppm	ASTM D5185m		21104		
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<1	<1	<1
Sodium	ppm	ASTM D5185m		22	6	6
Potassium	nnm	ASTM1)5185m	>20	4	<1	1
Mater	ppm	ASTM D5185m				0.044
Water	%	ASTM D6304	>0.05	0.021	0.010	0.014
ppm Water	% ppm	ASTM D6304 ASTM D6304	>0.05 >500	0.021 217	0.010 102	143.8
	% ppm	ASTM D6304 ASTM D6304 method	>0.05	0.021	0.010	143.8 history2
ppm Water FLUID CLEANLINE Particles >4µm	% ppm	ASTM D6304 ASTM D6304 method ASTM D7647	>0.05 >500 limit/base	0.021 217	0.010 102 history1 17777	143.8 history2 2246
ppm Water FLUID CLEANLINE Particles >4μm Particles >6μm	% ppm	ASTM D6304 ASTM D6304 method ASTM D7647 ASTM D7647	>0.05 >500 limit/base >1300	0.021 217 current	0.010 102 history1 17777 ▲ 5780	143.8 history2 2246 736
ppm Water FLUID CLEANLINE Particles >4μm Particles >6μm Particles >14μm	% ppm	ASTM D6304 ASTM D6304 Method ASTM D7647 ASTM D7647 ASTM D7647	>0.05 >500 limit/base >1300 >80	0.021 217 current  	0.010 102 history1 17777 ▲ 5780 ▲ 405	143.8 history2 2246 736 40
ppm Water FLUID CLEANLINE Particles >4µm Particles >6µm Particles >14µm Particles >21µm	% ppm	ASTM D6304 ASTM D6304 Method ASTM D7647 ASTM D7647 ASTM D7647	>0.05 >500 limit/base >1300 >80 >20	0.021 217 current  	0.010 102 history1 17777 ▲ 5780 ▲ 405 ▲ 92	143.8 history2 2246 736 40 11
ppm Water FLUID CLEANLINE Particles >4μm Particles >6μm Particles >14μm Particles >21μm Particles >38μm	% ppm	ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>0.05 >500 limit/base >1300 >80 >20 >4	0.021 217 current    	0.010 102 history1 17777 ▲ 5780 ▲ 405 ▲ 92 2	143.8 history2 2246 736 40 11 0
ppm Water FLUID CLEANLINE Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm Particles >71µm	% ppm	ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>0.05 >500 limit/base >1300 >80 >20 >4 >3	0.021 217 current     	0.010 102 history1 17777 ▲ 5780 ▲ 405 ▲ 92 2 2 0	143.8 history2 2246 736 40 11 0 0
ppm Water FLUID CLEANLINE Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm Particles >71µm Oil Cleanliness	% ppm ESS	ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ISO 4406 (c)	>0.05 >500 limit/base >1300 >80 >20 >4 >3 >/17/13	0.021 217 current    	0.010 102 history1 17777 ▲ 5780 ▲ 405 ▲ 92 2	143.8 history2 2246 736 40 11 0
ppm Water FLUID CLEANLINE Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm Particles >71µm	% ppm ESS	ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>0.05 >500 limit/base >1300 >80 >20 >4 >3	0.021 217 current     	0.010 102 history1 17777 ▲ 5780 ▲ 405 ▲ 92 2 2 0	143.8 history2 2246 736 40 11 0 0

Sample Rating Trend

Acid Number (AN)

mg KOH/g ASTM D8045 0.4

Contact/Location: Service Manager - AMAGAR

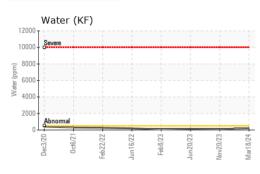
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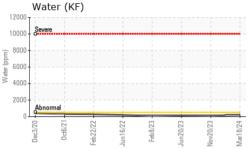
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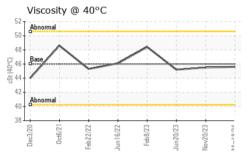
0.36



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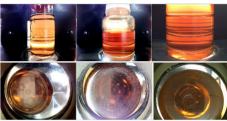




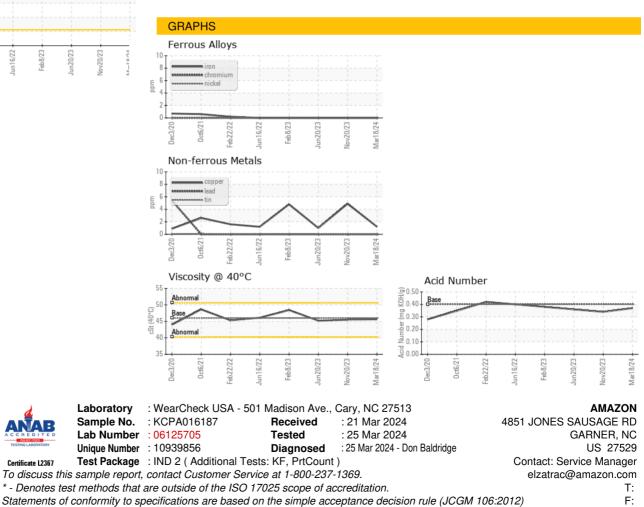


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	🔺 MODER	NONE	NONE
Sand/Dirt	scalar	*Visual	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 PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46	45.6	45.5	45.2
SAMPLE IMAGES		method	limit/base	current	history1	history2

Color



Bottom





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