

OIL ANALYSIS REPORT

Sample Rating Trend

ISO

Machine Id

KAESER SM 10 A/C 8668747 (S/N 1217)

Component Compressor

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

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. 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.

	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		KC121267	KC107788	
Sample Date		Client Info		05 Apr 2024	09 May 2023	
Machine Age	hrs	Client Info		8202	2988	
Oil Age	hrs	Client Info		0	2988	
Oil Changed		Client Info		N/A	Changed	
Sample Status				ABNORMAL	ABNORMAL	
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	
Titanium	ppm	ASTM D5185m	>3	0	0	
Silver	ppm	ASTM D5185m	>2	0	0	
Aluminum	ppm	ASTM D5185m	>10	0	0	
_ead	ppm	ASTM D5185m	>10	0	0	
Copper	ppm	ASTM D5185m	>50	12	7	
Tin	ppm	ASTM D5185m	>10	<1	0	
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	1	0	
Volybdenum	ppm	ASTM D5185m		0	0	
Vanganese	ppm	ASTM D5185m		0	0	
Vagnesium	ppm	ASTM D5185m	90	2	16	
Calcium	ppm	ASTM D5185m	2	0	<1	
Phosphorus	ppm	ASTM D5185m		0	1	
Zinc	ppm	ASTM D5185m		0	9	
				-	÷	
			11 1. 0			
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	limit/base >25	<1	0	
Silicon Sodium	ppm ppm	ASTM D5185m ASTM D5185m	>25	<1 2	0 3	
Silicon Sodium Potassium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	>25 >20	<1 2 0	0 3 <1	
Silicon Sodium Potassium Water	ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304	>25 >20 >0.05	<1 2 0 0.005	0 3 <1 0.007	
Silicon Sodium Potassium Water opm Water	ppm ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D5185m	>25 >20 >0.05 >500	<1 2 0	0 3 <1 0.007 70.5	
Silicon Sodium Potassium Water	ppm ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 method	>25 >20 >0.05	<1 2 0 0.005	0 3 <1 0.007 70.5 history1	
Silicon Sodium Potassium Water opm Water FLUID CLEANLIN	ppm ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304	>25 >20 >0.05 >500	<1 2 0 0.005 60 <u>current</u> 16369	0 3 <1 0.007 70.5 history1 7026	
Silicon Sodium Potassium Water opm Water FLUID CLEANLIN Particles >4µm	ppm ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 method	>25 >20 >0.05 >500 limit/base	<1 2 0 0.005 60 current	0 3 <1 0.007 70.5 history1	 history2
Silicon Sodium Potassium Water Dopm Water FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D53054 ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647	>25 >20 >0.05 >500 limit/base >1300 >80	<1 2 0 0 0.005 60 current 16369 ▲ 3765 ▲ 295	0 3 <1 0.007 70.5 history1 7026	 history2
Silicon Sodium Potassium Water opm Water FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 Method ASTM D7647 ASTM D7647	>25 >20 >0.05 >500 limit/base >1300 >80	<1 2 0 0 0.005 60 current 16369 ▲ 3765	0 3 <1 0.007 70.5 history1 7026 ▲ 3019	 history2
Silicon Sodium Potassium Water opm Water FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D53054 ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647	>25 >20 >0.05 >500 limit/base >1300 >80	<1 2 0 0 0.005 60 current 16369 ▲ 3765 ▲ 295	0 3 <1 0.007 70.5 history1 7026 ▲ 3019 ▲ 202	 history2
Silicon Sodium Potassium Water opm Water FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 Method ASTM D7647 ASTM D7647 ASTM D7647	>25 >20 >0.05 >500 limit/base >1300 >80 >20 >4	<1 2 0 0 0.005 60 current 16369 3765 295 93	0 3 <1 0.007 70.5 history1 7026 ▲ 3019 ▲ 202 ▲ 24	 history2
Silicon Sodium Potassium Water ppm Water	ppm ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 Method ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>25 >20 >0.05 >500 limit/base >1300 >80 >20 >4	<1 2 0 0 0.005 60 current 16369 ▲ 3765 ▲ 295 ▲ 93 ▲ 6	0 3 <1 0.007 70.5 history1 7026 ▲ 3019 ▲ 202 ▲ 24 0	 history2
Silicon Sodium Potassium Water FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm % ppm JESS	ASTM D5185m ASTM D5185m ASTM D5305m ASTM D6304 ASTM D6304 Method ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>25 >20 >0.05 >500 limit/base >1300 >80 >20 >4 >3	<1 2 0 0 0.005 60 current 16369 ▲ 3765 ▲ 295 ▲ 93 ▲ 6 0	0 3 <1 0.007 70.5 history1 7026 ▲ 3019 ▲ 202 ▲ 24 0 0 0	 history2



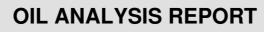
number of particles (1 ml) 10k 2k

12000

Built for a lifetime."

0.50 (B/H0.4 Ē0.30 - ag 0.20 - Pio 0.10 0.00 Mav9/23

12000 10000 Seven



Particle Trend	VISUAL	r	method	limit/base	current	history1	history2
4μm 6μm	White Metal	scalar *V	/isual	NONE	NONE	NONE	
14μm	Yellow Metal	scalar *V	/isual	NONE	NONE	NONE	
	Precipitate		/isual	NONE	NONE	NONE	
	Silt		/isual	NONE	NONE	NONE	
	Debris		/isual	NONE	NONE	NONE	
	Sand/Dirt		/isual	NONE	NONE	NONE	
24			/isual	NORML	NORML	NORML	
Aufs/24	Odor		/isual	NORML	NORML	NORML	
	Emulsified Water		/isual	>0.05	NEG	NEG	
Vater (KF)				>0.05			
Severe	Free Water	scalar *V	/isual		NEG	NEG	
	FLUID PROPER	TIES r	method	limit/base	current	history1	history2
	Visc @ 40°C	cSt AS	STM D445	46	44.8	44.0	
	SAMPLE IMAGE	S r	method	limit/base	current	history1	history2
Abnormal 72 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	Color						no image
cid Number	Bottom						no image
	GRAPHS						
	Ferrous Alloys				Particle Count		
	¹⁰ iron			491,520	1		T ²⁶
	o chromium			122,880			-24
V C J V	E 6						
<	4			30,720	°t		-22
Vater (KF)	2			7,680			-20
	0/23			5/24 I ml)	1.		-20 -18 -16 -14
Severe	May9/23			Apr5/24 (per 1 ml)			-18
	Non-ferrous Meta	ale		· 단 480		<u>``</u>	-16
	15 _T	115		of ball	í <u>``</u>		10
	copper			ja 120	-		-14
	10-			unu			-12
Abnormal	dd			30	1		12
ACC	3-			8	3 Sérere mal		10
A	0 L						
	May9/23			Apr5/24	² †		
/iscosity @ 40°C	Ma			Ϋ́Α).	14. 24.	26
Abnormal	Viscosity @ 40°C				Acid Number	14μ 21μ	38µ 71µ
	55 Abnormal			© ^{0.50}			
lase	50 - Abnormal			(B/H0,40	Base		
	00 99 45 83 Abnomal			É.0.30)		
	40 + Abnormal			40.20 N 0.10 V 0.00	•		
Abnormal	10 1			은 0.10)+		
	354						
1. 2. 2. A E. A	May9/23			Apr5/24	May9/23		And C 7.4
Laboratory Sample No Lab Number		01 Madison A Received Tested Diagnos	d : 16 : 17	, NC 27513 Apr 2024 Apr 2024 Apr 2024 - Do	ug Bogart	1930	E LANCASTE I LA SALLE AV NCASTER, P. US 1760

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

Contact/Location: ? ? - PENLAN Page 2 of 2

F: