

# **OIL ANALYSIS REPORT**

Sample Rating Trend

ISO

KAESER 8369867 (S/N 1194)

Component Compressor

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

### DIAGNOSIS

## Recommendation

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 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 acceptable for the time in service.

SAMPLE INFORM	<b>MATION</b>	method	limit/base	current	history1	history2
Sample Number		Client Info		KC05780796		
Sample Date		Client Info		28 Feb 2023		
Machine Age	hrs	Client Info		4907		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				ATTENTION		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	4		
Chromium	ppm	ASTM D5185m	>10	0		
Nickel	ppm	ASTM D5185m	>3	0		
Titanium	ppm	ASTM D5185m	>3	0		
Silver	ppm	ASTM D5185m	>2	0		
Aluminum	ppm	ASTM D5185m	>10	<1		
Lead	ppm	ASTM D5185m	>10	0		
Copper	ppm	ASTM D5185m	>50	14		
Tin	ppm	ASTM D5185m	>10	0		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES	pp		limit/base	-	biotorut	bistory 0
		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	<1		
Barium	ppm	ASTM D5185m	90	33		
Molybdenum	ppm	ASTM D5185m	0	0		
Manganese	ppm	ASTM D5185m	100	<1		
Magnesium	ppm	ASTM D5185m	100	27		
Calcium	ppm	ASTM D5185m	0	0		
Phosphorus	ppm	ASTM D5185m	0	2		
Zinc	ppm	ASTM D5185m	0	7		
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	2		
Sodium	ppm	ASTM D5185m		2		
Potassium	ppm	ASTM D5185m	>20	0		
Water	%	ASTM D6304	>0.05	0.017		
ppm Water	ppm	ASTM D6304	>500	174.4		
FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		12149		
Particles >6µm		ASTM D7647	>1300	<mark> </mark> 1492		
Particles >14µm		ASTM D7647	>80	29		
Particles >21µm		ASTM D7647	>20	8		
Particles >38µm		ASTM D7647	>4	1		
Particles >71µm		ASTM D7647	>3	0		
Oil Cleanliness		ISO 4406 (c)	>/17/13	<b>e</b> 21/18/12		
FLUID DEGRADA		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.39		
( -)	0 - 0			'		



Built for a lifetime."

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Particle Trend			/ISUAL		method	limit/base	current	history1	history2
12k - 4μm Ε 10k - 6μm 14μm		W	hite Metal	scalar	*Visual	NONE	NONE		
C TUK T			llow Metal	scalar	*Visual	NONE	NONE		
6k			ecipitate	scalar	*Visual	NONE	NONE		
d 6k-		Sil		scalar	*Visual	NONE	NONE		
			bris	scalar	*Visual	NONE	NONE		
78			ind/Dirt	scalar	*Visual	NONE	NONE		
			pearance	scalar	*Visual	NORML	NORML		
Feb 28/23		~	lor	scalar	*Visual	NORML	NORML		
			nulsified Water	scalar	*Visual	>0.05	NEG		
Water (KF)			ee Water	scalar	*Visual		NEG		
10000 - Severe			LUID PROPERT		method	limit/base	current	history1	history2
8000			sc @ 40°C	cSt	ASTM D445	45	44.5		
4000 -		-	SAMPLE IMAGES	3	method	limit/base	current	history1	history2
2000 Abnormal									
Feb28/23		Eep 28/23	blor					no image	no image
Acid Number		Во	ttom					no image	no image
ළී 0.72- ප		(	GRAPHS						
0.48-		F	errous Alloys				Particle Count		
B 0.24		<sup>10</sup> T				491,520			I <sup>26</sup>
0.00		- 8-	Iron chromium			122,880	1		-24
Feb 28/23		udd 4	nickel						
Feb		3 4				30,720	1		-22
Water (KF)		2				7,680			-20
12000 T		5/3	27/0			8/23 . 1 ml)			-20 -18 -16 -14
10000 - Severe		Eah 28/23	700			Feb28/23 s (per 1 ml)			+18
8000		N	Ion-ferrous Metals	5		Feb.28/23 1000 Feb.28/23 1001 ml)			-16
6000		<sup>15</sup> T2					1		
4000-		10-	copper			jo aquinu			14
2000-		mdd	tin			- 30	-		-12
Abnormal		5-							10
Feb 28/23		CC 20				0	Bibrevernal		+10
Feb		103	27/0			8/23	-		-8
Viscosity @ 40°C		с. Ем28/23	7 00			Feb28/23			
<sup>60</sup> I	-	- \	/iscosity @ 40°C			1	4 ونام Acid Number	14μ 21μ	38µ 71µ
55 Severe		<sup>60</sup> T							
Abnormal		00	Severe Abnormal			(1.20 分 0.96 更 0.72	Banormal		
(0.00) (0.00)		ġ. 50	Base			Ë 0.72			
45 - Abnormal	*****		pase Abnormal			4 0.48			
40		40	Severe			2 0.24	•		
35 Severe		35 🗆	2				123		5
-eb 28/23						Feb28/23	Feb28/23		Eeh28/23
	Certificate 12367 To discuss this sample rep * - Denotes test methods t Statements of conformity t	ber : KCC ber : 057 ber : 103 age : IND bort, conta that are out	60466 2 act Customer Servi Itside of the ISO 12	Recei Teste Diagn ce at 1-8 7025 sco	ved : 01 d : 02 losed : 03 00-237-1369 pe of accrea	Mar 2023 2 Mar 2023 Mar 2023 - Ange 9. Iitation.	ela Borella Coni luke.wolfi	tact: LUKE WOI enberger@gdene	S 83RD E AVE TULSA, OF US 7414 FENBERGEF