

# **OIL ANALYSIS REPORT**

## Sample Rating Trend



# Machine Id 8201855 (S/N 1359) Component

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

#### DIAGNOSIS

#### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

## Wear

All component wear rates are normal.

# Contamination

There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

#### Fluid Condition

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

			Jan2023	Feb2024		
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		KCPA004904	KCP52916	
Sample Date		Client Info		08 Feb 2024	19 Jan 2023	
Machine Age	hrs	Client Info		6052	3313	
Oil Age	hrs	Client Info		0	0	
Oil Changed		Client Info		N/A	Changed	
Sample Status				NORMAL	NORMAL	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	0	0	
Chromium		ASTM D5185m	>10	0	0	
Nickel	ppm	ASTM D5185m	>3	0	0	
	ppm			-		
Titanium	ppm	ASTM D5185m	>3	0	0	
Silver	ppm	ASTM D5185m	>2	0	0	
Aluminum	ppm	ASTM D5185m	>10	0	0	
Lead	ppm	ASTM D5185m	>10	0	0	
Copper	ppm	ASTM D5185m	>50	13	24	
Tin	ppm	ASTM D5185m	>10	0	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	0	
Barium	ppm	ASTM D5185m	90	0	0	
Molybdenum	ppm	ASTM D5185m	0	0	0	
Manganese	ppm	ASTM D5185m		0	0	
Magnesium	ppm	ASTM D5185m	100	0	2	
Calcium	ppm	ASTM D5185m	0	0	0	
Phosphorus	ppm	ASTM D5185m	0	0	9	
Zinc	ppm	ASTM D5185m	0	0	7	
Sulfur	ppm	ASTM D5185m	23500	13940	15721	
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	0	<1	
Sodium	ppm	ASTM D5185m		1	0	
Potassium	ppm	ASTM D5185m	>20	0	<1	
Water	%	ASTM D6304	>0.05	0.003	0.011	
ppm Water	ppm	ASTM D6304	>500	32	113.2	
FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		1784	1122	
Particles >6µm		ASTM D7647	>1300	500	400	
Particles >14μm		ASTM D7647	>80	34	37	
Particles >21µm		ASTM D7647		7	8	
Particles >38µm		ASTM D7647	>4	0	0	
Particles >71µm		ASTM D7647		0	0	
		ISO 4406 (c)	>/17/13	0 18/16/12	17/16/12	
Oil Cleanliness		100 4400 (0)	<i>p</i> / 11/10			
Oil Cleanliness						historv2
	TION mg KOH/g	method ASTM D8045	limit/base	current	history1	history2



# **OIL ANALYSIS REPORT**

12000 <del>-</del>	Water (KF)	VISUAL		method	limit/base	current	history1	history2
10000-	Severe	White Metal	scalar	*Visual	NONE	NONE	NONE	
	[	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
- 0009 (ppm)		Precipitate	scalar	*Visual	NONE	NONE	NONE	
A000		Silt	scalar	*Visual	NONE	NONE	NONE	
2000		Debris	scalar	*Visual	NONE	NONE	NONE	
2000-	Abnormal	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
0-	an 1 9/2 3 Feb 8/2 4	Appearance	scalar	*Visual	NORML	NORML	NORML	
	Jan 19/23	Odor	scalar	*Visual	NORML	NORML	NORML	
	Particle Trend	Emulsified Water	scalar	*Visual	>0.05	NEG	NEG	
<sup>2k</sup> T		Free Water	scalar	*Visual		NEG	NEG	
Ē 2k -	4μm 6μm 14μm	FLUID PROPER	TIES	method	limit/base	current	history1	history2
- 2k - 1k - 1k - 1k -		Visc @ 40°C	cSt	ASTM D445	45	45.0	44.2	
jo Jaquar 1k -		SAMPLE IMAGE	S	method	limit/base	current	history1	history2
Ok	Jan 19/23 Feb 8/24	Color						no image
12000 -	Water (KF) Severe	Bottom					$\bigcirc$	no image
+ 0009 (ppm)		GRAPHS						
≥ 4000		Ferrous Alloys			0.02540.005	Particle Count		
2000-	Abnormal	10 iron			491,520	I		T <sup>26</sup>
01		o chromium			122,880			-24
	Jan 19,23				30,720	******		-22
		2						
60 <del>.</del>	Viscosity @ 40°C	0			7,680	· · · · ·		-20 🕫
	Severe	lan 19/23			Feb8/24. (per 1 ml)			-18 4406
55-		,			cles (p F	<u>``</u>	<b>`</b>	1999
() 50 - 0+) ts 45 -	Abnormal	Non-ferrous Meta	ls		480-			16 Clean
	Base	20 - copper			Feb8/24 1000 - 10000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 -		N	-14 8
40	Abnormal							+20 ISO 4406:1999 Cleanliness Code +16 Cleanliness Code +14 -14 -14 -14 -14 -14 -14 -14 -14 -14 -
25	Severe	E 15- min tin						
35 T	Jan 19/23 -	5			8	Berevenal		-10
	Janl			***********************	4Z 2.	+	$\backslash$	-8
	Particle Trend	Jan 19			Feb8/24			
<sup>2k</sup> T		Viscosity @ 40°C			4	ہوں۔ Acid Number	14μ 21μ	38µ 71µ
Ê	4μm 6μm	<sup>60</sup> L			1.20·	т		
ZK -	14μm	55 - Severe			(BHO) 0.96	Bbsermal		
otured 1k		0 50 - 0 0 + 0 Base			Ĕ 0.72			
- 1k - 1k - 1k -		Abnormai			4 0.48			
		40 35			0.24 V 0.00			
Ok	() () ()				Feb8/24	9/23		Feb 8/24 -
	Jan 19/23	Jan 19/23			Feb	Jan 19/23		Feb
	Laboratory Sample No. Lab Number Unique Number Certificate 12367 Test Package To discuss this sample report * - Denotes test methods that Statements of conformity to s	: 10898381 : IND 2 ( Additional Te ; contact Customer Serv are outside of the ISO 3	Rece Teste Diagr sts: KF, F vice at 1-8 17025 sco	ived : 26 ed : 27 nosed : 27 PrtCount ) 800-237-1369 ope of accred	5 Feb 2024 7 Feb 2024 Feb 2024 - Dou 9. <i>litation.</i>	ig Bogart	H. Contact: Ser	HINE & TOOL 1 WINTER ST ANOVER, MA US 02339 vice Manager T: F:

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Contact/Location: Service Manager - CUSHAN