

# **OIL ANALYSIS REPORT**

#### Sample Rating Trend

ISO

KAESER 7370207

Compressor

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

## DIAGNOSIS

#### Recommendation

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 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.

			Jan2021	Apr2021		
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		KC86331	KC91490	
Sample Date		Client Info		28 Apr 2021	04 Jan 2021	
Machine Age	hrs	Client Info		3262	2275	
Oil Age	hrs	Client Info		1000	2275	
Oil Changed		Client Info		Changed	Changed	
Sample Status				ABNORMAL	ABNORMAL	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	<1	<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	
Lead	ppm	ASTM D5185m	>10	0	<1	
Copper	ppm	ASTM D5185m	>50	2	5	
Tin	ppm	ASTM D5185m	>10	0	0	
Antimony	ppm	ASTM D5185m		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	<1	
Magnesium	ppm	ASTM D5185m	100	0	34	
Calcium	ppm	ASTM D5185m	0	0	0	
Phosphorus	ppm	ASTM D5185m	0	0	5	
Zinc	ppm	ASTM D5185m	0	0	35	
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<1	1	
Sodium	ppm	ASTM D5185m		7	13	
Potassium	ppm	ASTM D5185m	>20	7	9	
Water	%	ASTM D6304	>0.05	0.026	0.015	
ppm Water	ppm	ASTM D6304	>500	264.7	155.0	
FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		6565	11674	
Particles >6µm		ASTM D7647	>1300	<u> </u>	4547	
Particles >14µm		ASTM D7647	>80	<b>A</b> 309	<b>A</b> 706	
Particles >21µm		ASTM D7647	>20	<u> </u>	<u> </u>	
Particles >38µm		ASTM D7647	>4	2	<b>1</b> 1	
Particles >71µm		ASTM D7647	>3	0	0	
Oil Cleanliness		ISO 4406 (c)	>/17/13	<b>1</b> 8/15	▲ 19/17	
FLUID DEGRADA		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.416	0.341	



# **OIL ANALYSIS REPORT**

12k	Particle Trend	VISUAL		method	limit/base	current	history1	history2
	4µm Sum	White Metal	scalar	*Visual	NONE	NONE	NONE	
E <sup>10k</sup>	14μm	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
number of particles (1 8 k : 7 8 k :		Precipitate	scalar	*Visual	NONE	NONE	NONE	
Ed for all	Bhase management	Silt	scalar	*Visual	NONE	NONE	NONE	
admu 4K		Debris	scalar	*Visual	NONE	LIGHT	LIGHT	
2.1		Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
0k	77 77	Appearance	scalar	*Visual	NORML	NORML	NORML	
	Jan4/21 Apr28/21	Odor	scalar	*Visual	NORML	NORML	NORML	
		Emulsified Water	scalar	*Visual	>0.05	NEG	NEG	
12000	Water (KF)	Free Water	scalar	*Visual	20.00	NEG	NEG	
10000	Severe	FLUID PROPER		method	limit/base	current	history1	history2
(m 8000	-	Visc @ 40°C	cSt	ASTM D445	45	46.5	43.8	THISTOLYZ
(bbm) 6000 4000								history 0
2000		SAMPLE IMAGE	5	method	limit/base	current	history1	history2
0	Abnormal	Color						no image
1.20 الأرام الأرام الماري المار المار المار المار المار الممار الممار الممار الممار الممار الممار الماري الماري المار الممارما الممارما الممارما الممارما الممارما الممارما الممارما الممارما مم المارمارما الممارما الممارما مم مارمارما مم مارما مم مارما مم مارما مم مارما مم مارما مم مارما مم مارما مم مارما مم مارمم مارما مم مارمم مم مارمم مم مم مم مم مم مم مم مم مم مم مم مم م	Acid Number	Bottom						no image
L o.72		GRAPHS						
Eerrous Allovs A Particle Count								
Pio 90.24		10 iron			491,520	I		T <sup>26</sup>
0.00		o thromium			122,880			-24
	Jan 4/2	E 6						
	۲ ۲	4 2			30,720	†		-22
	Water (KF)				7,680	~ `		-20 =
12000		Jan 4/21			Apr28/21 (per 1 ml)			0 44
10000	Severe	Jar			Apr2 s (per		<b>.</b>	+18 8
Ê 8000		Non-ferrous Meta	ls		-90 112 480		< .	-16 C
0000 Mater (ppm)					12/82/14 1.920 480 120 120 120	×		120 Us0 4406:1999 Cleanliness 18 - 16 - 116 - 114 - 11
≥ 4000		8 - Isaa lead				Ī		14 SS Co
2000					30	-		-12 Code
0	Abnormal	2			- 8			+10
	Jan4/21 10 ac1					<b>Berese</b> mal		
	ل. ^	, Jan4/21			Apr28/21			
	Viscosity @ 40°C	Jar			Apró			6
60		Viscosity @ 40°C			4	<sup>µ</sup> مو Acid Number	14μ 21μ	38µ 71µ
55	Severe	60 55 Severe			<sub>3</sub> 1.20	Basermal		
C 50	Abnormal				(BHO) 1.20			
()_0} tsi tsi	Base	© 50 + Abnormal Base S 45 + Base Abnormal			<u>ຍ</u> 0.72	•		
<sup>9</sup> 3 45	Abnormal	Automa		****	a 0.48			
40	Severe	40 Severe			4 0.24			
35		Jan4/21			8/21	Jan4/21		8/21-
	Jл4,neb	Jan			Apr28/2	Jan		Apr28/21
	Laboratory Sample No. Lab Number Unique Number Test Package To discuss this sample report, * - Denotes test methods that	: 9506294 : IND 2 contact Customer Serv are outside of the ISO 1	Rece Teste Diagr vice at 1-8	ived : 18 ed : 19 nosed : 20 800-237-1369 ope of accred	3 May 2021 9 May 2021 May 2021 - Jonath 9. ditation.		43650 OBERLI Contact: Se	OBERLIN, OH US 44014 rvice Manager T:
	Statements of conformity to sp	pecifications are based	on the sin	nple accepta	nce decision	rule (JCGM 106	5:2012)	F: