

# **OIL ANALYSIS REPORT**



Machine Id

# 8823528 (S/N 1859)

## Component Compressor Fluid 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 acceptable for the time in service.

SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		KCPA012756		
Sample Date		Client Info		18 Apr 2024		
Machine Age	hrs	Client Info		1589		
Oil Age	hrs	Client Info		3000		
Oil Changed		Client Info		Changed		
Sample Status				ABNORMAL		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	1		
Chromium	ppm	ASTM D5185m	>10	<1		
Nickel	ppm	ASTM D5185m	>3	0		
Titanium	ppm	ASTM D5185m	>3	<1		
Silver	ppm	ASTM D5185m	>2	0		
Aluminum	ppm	ASTM D5185m	>10	2		
Lead	ppm	ASTM D5185m	>10	0		
Copper	ppm	ASTM D5185m	>50	8		
Tin	ppm	ASTM D5185m	>10	<1		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0		
Barium	ppm	ASTM D5185m	90	0		
Molybdenum	ppm	ASTM D5185m	0	0		
Manganese	ppm	ASTM D5185m		0		
Magnesium	ppm	ASTM D5185m	100	32		
Calcium	ppm	ASTM D5185m	0	1		
Phosphorus	ppm	ASTM D5185m	0	6		
Zinc	ppm	ASTM D5185m	0	16		
Sulfur	ppm	ASTM D5185m	23500	21208		
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	2		
Sodium	ppm	ASTM D5185m		6		
Potassium	ppm	ASTM D5185m	>20	5		
Water	%	ASTM D6304	>0.05	0.013		
ppm Water	ppm	ASTM D6304	>500	134		
FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		13879		
Particles >6µm		ASTM D7647	>1300	<u> </u>		
Particles >14µm		ASTM D7647	>80	<b>4</b> 981		
Particles >21µm		ASTM D7647	>20	<u> </u>		
Particles >38µm		ASTM D7647	>4	<u> </u>		
Particles >71µm		ASTM D7647	>3	0		
Oil Cleanliness		ISO 4406 (c)	>/17/13	<b>A</b> 21/20/17		
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.334		



12000

8000 Water (ppm) 6000 4000

(B/H0.9 KOH/8) E0.72 - ag 0.48

- Piop 0.24 0.00 Apr18/24

12000

10000 Severe

800 Water (ppm) 6000

Seve 10000

Built for a lifetime."

# **OIL ANALYSIS REPORT**

A Particle Trend	VISUAL		method	limit/base	current	history1	history2
4k - 4μm 6μm	White Metal	scalar	*Visual	NONE	NONE		
2k - 14µm	Yellow Metal	scalar	*Visual	NONE	NONE		
0k	Precipitate	scalar	*Visual	NONE	NONE		
6k -	Silt	scalar	*Visual	NONE	NONE		
4k -	Debris	scalar	*Visual	NONE	NONE		
2k	Sand/Dirt	scalar	*Visual	NONE	NONE		
9 Apr18/24	Appearance Odor	scalar	*Visual	NORML	NORML		
Apri	Odor	scalar	*Visual	NORML	NORML		
Water (KF)	Emulsified Wate	er scalar	*Visual	>0.05	NEG		
	Free Water	scalar	*Visual		NEG		
00 - Servere	FLUID PROF	PERTIES	method	limit/base	current	history1	history2
	Visc @ 40°C	cSt	ASTM D445	45	44.1		
0	SAMPLE IMA	AGES	method	limit/base	current	history1	history2
0 - Abnormal							
Apri 824	Poll 18/24					no image	no image
Acid Number	Bottom					no image	no image
72	GRAPHS						
18 +	Ferrous Alloys	5			A Particle Count		
24	10 T			491,52			T <sup>26</sup>
	8 - iron chromium			122,88	30 -		-24
Apr18/24	E 6						
Ap	-			30,72	20 -		+22
Water (KF)	2			7,68	30		-20
	-			8/24 -	1		
0 - Severe	Apr18/24			Apr18/24 s (per 1 m	20-		-18
0-	Non-ferrous N	Metals		Apr18/24 particles (per 1 ml)	30-		+20 +18 +16 +14 +12
0 -	10 T			ţ.	•		
0	8 - copper			number 15	20 -	`\\\	14
D +	E 6				30 -		-12
Abnormal	- 4				8		10
Apr18/24					<sup>0</sup> Berevernal		
Ap	8/24			Apr18/24	2-		
Viscosity @ 40°C	م Apr18/2			Apr1	0		
	Viscosity @ 4	0°C			<sup>4</sup> نہ <sup>6</sup> نہ Acid Number	14μ 21μ	38µ 71µ
5 - Severe	60 T						
Abnormal	55 - Severe Abnormal			K0H/	96 - <b>Base</b> rmal		
U	ි 50 - Abnomal හි 45 - Base			Ĕ0.7	12 -		
5 - Base Abnomal	Aphonia		*****	- <sup>4</sup> 0.4	18		
0 ╉ ╢╴	40 Severe			1.1 2.0 H03 5.0 H04 5.0 Wmmber 5.0 Mmmber 5.0 Mmber 5.0 Mmmber 5.0 Mmber 5.0 Mmber 5	24		
Severe	354				with the second s		ŝ
Apr18/24	а Apr18/24			Apr18/24	Apr18/2*		10,0 Look
Labora Sample Lab Nu Unique N	<b>No.</b> : KCPA012756	Recei Teste Diagr	ived : 10 ed : 14 nosed : 14	r, NC 27513 ) May 2024 I May 2024 May 2024 - Ang	575	NCE ENAMELI COLLEGE CO	

To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

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

Contact/Location: Service Manager - APPUPL Page 2 of 2

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