

## **OIL ANALYSIS REPORT**





Machine Id 3002723 (S/N 1082) Component

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

### DIAGNOSIS

#### Recommendation

No corrective action is recommended at this time. 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 high 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 suitable for further service.

SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		KCPA013915		
Sample Date		Client Info		25 Mar 2024		
Machine Age	hrs	Client Info		920		
Oil Age	hrs	Client Info		920		
Oil Changed		Client Info		N/A		
Sample Status				ABNORMAL		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	0		
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	0		
Lead	ppm	ASTM D5185m	>10	0		
Copper	ppm	ASTM D5185m	>50	<1		
Tin	ppm	ASTM D5185m	>10	0		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0		
Barium	ppm	ASTM D5185m	90	13		
Molybdenum	ppm	ASTM D5185m	0	0		
Manganese	ppm	ASTM D5185m	0	0		
Magnesium	ppm	ASTM D5185m	100	77		
Calcium	ppm	ASTM D5185m	0	0		
Phosphorus	ppm	ASTM D5185m	0	0		
Zinc	ppm	ASTM D5185m		0		
Sulfur	ppm	ASTM D5185m	23500	20865		
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<1		
Sodium	ppm	ASTM D5185m		19		
Potassium	ppm	ASTM D5185m	>20	0		
Water	%	ASTM D6304		0.021		
ppm Water	ppm	ASTM D6304	>500	214		
FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		37237		
Particles >6µm		ASTM D7647	>1300	<u> </u>		
Particles >14µm		ASTM D7647	>80	62		
Particles >21µm		ASTM D7647	>20	16		
Particles >38µm		ASTM D7647	>4	0		
Particles >71µm		ASTM D7647	>3	0		
Oil Cleanliness		ISO 4406 (c)	>/17/13	<b>22/20/13</b>		
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.40		
. ,	,					



# **OIL ANALYSIS REPORT**

A.um		VISUAL		method	limit/base	current	history1	history
-μπ		White Metal	scalar	*Visual	NONE	NONE		
14μm		Yellow Metal	scalar	*Visual	NONE	NONE		
		Precipitate	scalar	*Visual	NONE	NONE		
		Silt	scalar	*Visual	NONE	NONE		
		Debris	scalar	*Visual	NONE	NONE		
	******	Sand/Dirt	scalar	*Visual	NONE	NONE		
+ +2/6	6/24	Appearance	scalar	*Visual	NORML	NORML		
Mar25/24	Mar25/24	Odor	scalar	*Visual	NORML	NORML		
		Emulsified Water	scalar	*Visual	>0.05	NEG		
Water (KF)		Free Water	scalar	*Visual		NEG		
Severe		FLUID PROPER			limit/bass		historyd	history
				method	limit/base	current	history1	history
		Visc @ 40°C	cSt	ASTM D445	45	45.2		
		SAMPLE IMAGE	S	method	limit/base	current	history1	history
Abnormal	44							
Mar25/24	Mar25/24	Color					no image	no image
Acid Number								
		Bottom					no imago	no imogo
Absermal		Bollom					no image	no image
		GRAPHS						
		Ferrous Alloys				Particle Count		
		10 iron			491,52	0		
1 	V	o chromium			122,88	0-		
Mar25/24	U 36-				20.72			
Z	р. Ш	2			30,72			
Water (KF)		0			7,68	-		
0		Mar25/24 -			Mar25/24 . s (per 1 ml)			
Severe		Marź			Nar25 S (per	1, 1,	•	
		Non-ferrous Meta	ls		Mar25/24- particles (per 1 ml) 86	0		
		10 copper				1		
		o - seesesseese lead			Jo Jo Jo Jo			1
		E 6			- 3	0-		
Abnormal		4				8	1	
Mar25/24	C D A	2				<sup>8</sup> Berevernal	/	
Mar		5/24			5/24	2 -		
Viscosity @ 40°C		Mar25/24			Mar25/24	0		
		 Viscosity @ 40°C			-	4µ 6µ	14µ 21µ	38µ 71
Severe		60 T			_12	Acid Number		
Abnormal		55 Severe			(B/HO) 0.9 (B/HO) 0.9 (D) 0.7			
		G 50 - Abnormal Base Abnormal			Ĕ 0.7	2		
		* Base ある 45 - Abnormal			40.4 Poor V 0.2 V 0.0	8-		
Base		40 - Severe			N p 0.2	4		
Base Abnormal		35						
		4			Mar25/24	Mar25/2 <sup>4</sup>		
Base Abnormal Severe + 17/5 2/2 W	10	Mar25/24			121	II.2.5		