

## **OIL ANALYSIS REPORT**

Sample Rating Trend

ISO

Machine Id

### 8261146 (S/N 1024) Component Compressor

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

#### DIAGNOSIS

#### Recommendation

No corrective action is recommended at this time. 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 moderate 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.

SAMPLE INFORM	1ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		KCPA017156	KCP53101	
Sample Date		Client Info		10 Apr 2024	27 Apr 2023	
Machine Age	hrs	Client Info		2305	1278	
Oil Age	hrs	Client Info		0	1278	
Oil Changed		Client Info		Changed	Not Changd	
Sample Status				ATTENTION	ABNORMAL	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	0	<1	
Chromium	ppm	ASTM D5185m	>10	0	0	
Nickel	ppm	ASTM D5185m	>3	<1	<1	
Titanium	ppm	ASTM D5185m	>3	0	0	
Silver	ppm	ASTM D5185m	>2	0	0	
Aluminum	ppm	ASTM D5185m	>10	<1	<1	
Lead	ppm	ASTM D5185m	>10	0	<1	
Copper	ppm	ASTM D5185m	>50	2	<1	
Tin	ppm	ASTM D5185m	>10	<1	<1	
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	<1	26	
Molybdenum	ppm	ASTM D5185m	0	0	0	
Manganese	ppm	ASTM D5185m		<1	<1	
Magnesium	ppm	ASTM D5185m	100	36	43	
Calcium	ppm	ASTM D5185m	0	1	<1	
Phosphorus	ppm	ASTM D5185m	0	3	5	
Zinc	ppm	ASTM D5185m	0	2	1	
Sulfur	ppm	ASTM D5185m	23500	22411	22744	
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	-			
	1010		>25	0	0	
	ppm	ASTM D5185m		11	7	
Potassium	ppm ppm	ASTM D5185m ASTM D5185m	>20	11 8	7 8	
Potassium Water	ppm	ASTM D5185m ASTM D5185m ASTM D6304	>20 >0.05	11 8 0.019	7 8 • 0.175	
Potassium Water opm Water	ppm ppm % ppm	ASTM D5185m ASTM D5185m	>20	11 8	7 8	
Potassium Water ppm Water FLUID CLEANLIN	ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 method	>20 >0.05	11 8 0.019 195 current	7 8 • 0.175	  
Potassium Water opm Water FLUID CLEANLIN Particles >4µm	ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 method ASTM D7647	>20 >0.05 >500 limit/base	11 8 0.019 195 current 2790	7 8 ▲ 0.175 ▲ 1750	  
Potassium Water ppm Water FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 <b>method</b> ASTM D7647 ASTM D7647	>20 >0.05 >500 limit/base	11 8 0.019 195 current 2790 1261	7 8 ▲ 0.175 ▲ 1750 history1	   history2
Potassium Water opm Water FLUID CLEANLIN Particles >4μm Particles >6μm Particles >14μm	ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 <b>Method</b> ASTM D7647 ASTM D7647 ASTM D7647	>20 >0.05 >500 limit/base >1300 >80	11 8 0.019 195 current 2790 1261 93	7 8 ▲ 0.175 ▲ 1750 history1	   history2
Potassium Water opm Water FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm	ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>20 >0.05 >500 limit/base >1300 >80 >20	11 8 0.019 195 current 2790 1261 93 20	7 8 ▲ 0.175 ▲ 1750 ► history1 	   history2 
Potassium Water ppm Water FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>20 >0.05 >500 limit/base >1300 >80 >20 >4	11 8 0.019 195 current 2790 1261 93 20 1	7 8 ▲ 0.175 ▲ 1750 ★ history1  	  history2 
Potassium Water ppm Water FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>20 >0.05 >500 limit/base >1300 >80 >20 >4 >3	11 8 0.019 195 current 2790 1261 93 20 1 1 0	7 8 ▲ 0.175 ▲ 1750 ► history1 ← ←	  history2   
Potassium Water opm Water FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm Particles >71µm Oil Cleanliness	ppm % ppm ESS	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>20 >0.05 >500 limit/base >1300 >80 >20 >4	11 8 0.019 195 current 2790 1261 93 20 1	7 8 ▲ 0.175 ▲ 1750 → history1   	  history2   
Sodium Potassium Water ppm Water FLUID CLEANLIN Particles >4µm Particles >6µm Particles >6µm Particles >21µm Particles >21µm Particles >71µm Oil Cleanliness FLUID DEGRADA	ppm % ppm ESS	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>20 >0.05 >500 limit/base >1300 >80 >20 >4 >3	11 8 0.019 195 current 2790 1261 93 20 1 1 0	7 8 ▲ 0.175 ▲ 1750 → history1    	  history2     

Contact/Location: DAVID SANSOM - NORTOM Page 1 of 2



Severe 10000 8000 Water (ppm) 6000 4000 2000 Abnorm 0 Apr27/23

(B/H0) KOH/B E0.72 Jag un 0.48 Pio 0.24 0.00

12000

8000 Water (ppm)

# **OIL ANALYSIS REPORT**

Particle Trend	VISUAL					history1	history2
4μm	White Metal	scalar	*Visual	NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
24	Precipitate	scalar	*Visual	NONE	NONE	NONE	
2k	Silt	scalar	*Visual	NONE	NONE	NONE	
	Debris	scalar	*Visual	NONE	NONE	▲ MODER	
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
		scalar	*Visual	NORML	NORML	HAZY	
Apr27/23	Appearance Odor	scalar	*Visual	NORML	NORML	NORML	
	Emulsified Water	scalar	*Visual	>0.05	NEG	0.2%	
Water (KF)	Free Water	scalar	*Visual		NEG	NEG	
000 + <b>Severe</b>	FLUID PROPER		method	limit/base	current	history1	history2
000	Visc @ 40°C	cSt	ASTM D445	45	45.06	43.6	
000	SAMPLE IMAGE	S	method	limit/base	current	history1	history2
000 - Abnormal							
0					a.		no image
Acid Number	Bottom						no image
1.72	GRAPHS						
	Ferrous Alloys				Particle Coun	t	
.24	10 iron			491,520	<sup>1</sup>		1 <sup>26</sup>
	o t			122,880			-24
Apr27/23							
A P	4			30,720	0-		-22
Water (KF)				7,680	D- 🔪		20 2
	Apr27/23			Apr10/24 (per 1 ml)			0 44
000 - Severe	Aprž			Apr10/24 of particles (per 1 ml)		<b>N</b>	+20 501 4406; 1999 -18 106; 1999 -16 Cleaning -14 Cleanin
000 -	Non-ferrous Meta	ls		Horite 480			-16 G
000	10 copper			jo jo jo 12(			14 0
000 -	6 - management lead				1		5
000 - Abnormal				30	0-		-12 8
0	2				B barrows		-10
Apr27/23					<b>Server</b> al		
As .	27/23			Apr10/24	2-		
Viscosity @ 40°C	Apr27,			Apr		14	28
60	Viscosity @ 40°C				Acid Number	14μ 21μ	38μ 71μ
55 Severe	60 cc Severe			<u>s</u> 1.20	Basermal		
Abnormal	33			(1.20 分の.96 更0.72			
550 - Base	( <sup>4</sup> )			£0.72 تە	2		
445 - Base Abnormal	40 Abnormal			0.44	· · · · · · · · · · · · · · · · · · ·		
40 - Severe	35 Severe			U.04			
35				- 0.00	,		0/24
Apr27/23	Apr27/23			Apr10/24	Apr27/23		Apr10/24
Laborator Sample Ner Lab Numb Unique Num Certificate 12367 To discuss this sample rep	b. : KCPA017156 er : 06179449 ber : 11030775 ge : IND 2 ( Additional Te	Recei Teste Diagr sts: KF, P <i>vice at 1-8</i>	ived : 14 d : 20 nosed : 21 htCount ) 800-237-1369	4 May 2024 ) May 2024 May 2024 - Jonat 9.	1		E CENTER RD TOMBALL, TX US 77377 VID SANSOM

Report Id: NORTOM [WUSCAR] 06179449 (Generated: 05/21/2024 08:46:22) Rev: 1

Contact/Location: DAVID SANSOM - NORTOM