

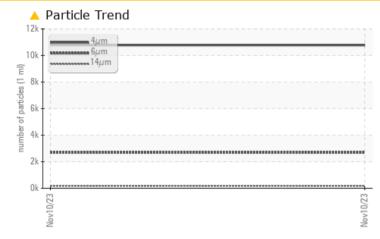
# **PROBLEM SUMMARY**

# Sample Rating Trend ISO

### Machine Id 7459198 (S/N 1136) Component

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

### COMPONENT CONDITION SUMMARY



### 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.

## PROBLEMATIC TEST RESULTS

Sample Status		ABNORMAL	 
Particles >6µm	ASTM D7647 >1300	<u> </u>	 
Particles >14µm	ASTM D7647 >80	<b>A</b> 176	 
Particles >21µm	ASTM D7647 >20	<b>4</b> 1	 
Oil Cleanliness	ISO 4406 (c) >/17/13	🔺 21/19/15	 

Customer Id: AMALASKC Sample No.: KCPA003553 Lab Number: 06016433 Test Package: IND 2



To manage this report scan the QR code

*To discuss the diagnosis or test data:* Doug Bogart +1 (800)237-1369 x4016 <u>dougb@wearcheckusa.com</u>

*To change component or sample information:* Customer Service +1 1-800-237-1369 <u>customerservice@wearcheck.com</u> There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS



# **OIL ANALYSIS REPORT**





Machine Id 7459198 (S/N 1136) 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 particulates present in the oil.

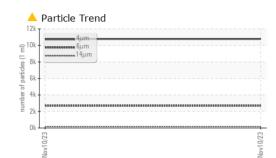
### Fluid Condition

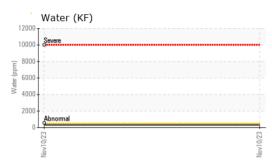
The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

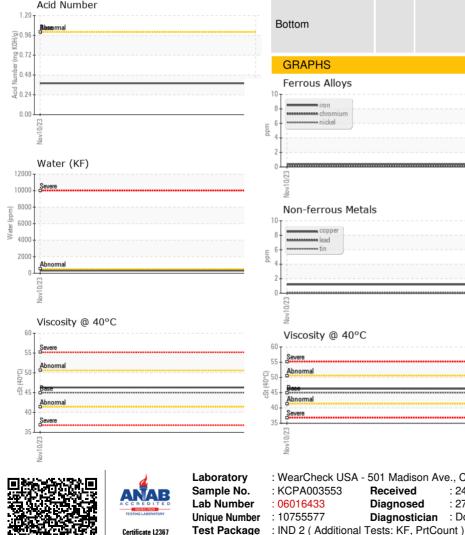
Sample Number   Client Info   KCPA003553   ···   ···     Sample Date   Info   10 Nov 2023   ···   ···     Machine Age   hrs   Client Info   4926   ···   ···     Oil Age   hrs   Client Info   0   ···   ···     Oil Changed   Client Info   N/A   ···   ···   ···     Sample Status   Im   Method   Imit/base   current   history1   history2     Iron   ppm   ASTM D5155n   >10   <1   ···   ···     Nickel   ppm   ASTM D5155n   >3   <1   ···   ···     Nickel   ppm   ASTM D5155n   >10   <1   ···   ···     Silver   ppm   ASTM D5155n   >10   2   ···   ···   ···     Auminum   ppm   ASTM D5155n   >10   0   ···   ···   ···     Auminum   ppm   ASTM D5155n   0   1   ···   ··· </th <th>SAMPLE INFORM</th> <th>IATION</th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Machine Age   hrs   Client Info   4926       Oil Age   hrs   Client Info   0       Sample Status   Client Info   N/A       WEAR METALS   method   Imit/base   current   history1   history2     Iron   ppm   ASTM D5155m   >50   <1	Sample Number		Client Info		KCPA003553		
Oil Age   hrs   Client Info   0       Oil Changed   Client Info   N/A       Sample Status   Imat/Decom/Deco	Sample Date		Client Info		10 Nov 2023		
Oil Changed   Client Info   N/A       Sample Status   rm   method   limit/base   current   history1   history2     WEAR METALS   method   limit/base   current   history1   history2     Iron   ppm   ASTM D5185m   >50   <1       Nickel   ppm   ASTM D5185m   >3   <10   <11       Nickel   ppm   ASTM D5185m   >3   <10   other       Aluminum   ppm   ASTM D5185m   >10   0        Lead   ppm   ASTM D5185m   >10   0        Vanadium   ppm   ASTM D5185m   >10   0       Gadmium   ppm   ASTM D5185m   0   0       Magnesium   ppm   ASTM D5185m   0   0       Gadmium	Machine Age	hrs	Client Info		4926		
Sample Status   Image   Image   ABNORMAL    Image   Image <thimage< th="">   Image   Image</thimage<>	Oil Age	hrs	Client Info		0		
WEAR METALS   method   limit/base   current   history1   history2     Iron   ppm   ASTM D5185m   >50   <1	Oil Changed		Client Info		N/A		
Iron   ppm   ASTM D5185m   >50   <1	Sample Status				ABNORMAL		
Chromium   ppm   ASTM D5185m   >10   <1	WEAR METALS		method	limit/base	current	history1	history2
Chromium   ppm   ASTM D5185m   >10   <1       Nickel   ppm   ASTM D5185m   >3   <1	Iron	ppm	ASTM D5185m	>50	<1		
NickelppmASTM D5185m>3<1TitaniumppmASTM D5185m>3<1	Chromium	ppm	ASTM D5185m	>10	<1		
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   1       Vanadium   ppm   ASTM D5185m   >10   0       Cadmium   ppm   ASTM D5185m   >10   0       ADDITIVES   method   limit/base   current   history1   history2     Boron   ppm   ASTM D5185m   0   -1       Magnesium   ppm   ASTM D5185m   0   <1	Nickel		ASTM D5185m	>3	<1		
Silver ppm ASTM D5185m >2 0     Aluminum ppm ASTM D5185m >10 0     Lead ppm ASTM D5185m >10 0     Copper ppm ASTM D5185m >50 1     Copper ppm ASTM D5185m >10 0     Vanadium ppm ASTM D5185m >10 0     Vanadium ppm ASTM D5185m >10 0     Cadmium ppm ASTM D5185m 0 0      ADDITIVES method limit/base current history1 history2   Boron ppm ASTM D5185m 0 0      Magnaese ppm ASTM D5185m 0 <1	Titanium		ASTM D5185m	>3	<1		
Aluminum   ppm   ASTM D5185m   >10   2       Lead   ppm   ASTM D5185m   >10   0       Copper   ppm   ASTM D5185m   >50   1       Tin   ppm   ASTM D5185m   >10   0       Vanadium   ppm   ASTM D5185m   >10   0       Cadmium   ppm   ASTM D5185m   >10   0       ADDITIVES   method   limit/base   current   history1   history2     Boron   ppm   ASTM D5185m   0   0       Magnaese   ppm   ASTM D5185m   0   <1					0		
Lead   ppm   ASTM D5185m   >10   0      Copper   ppm   ASTM D5185m   >50   1       Tin   ppm   ASTM D5185m   >10   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       Molybdenum   ppm   ASTM D5185m   90   4       Manganese   ppm   ASTM D5185m   0   <11	Aluminum			>10	-		
Copper   ppm   ASTM D5185m   >50   1       Tin   ppm   ASTM D5185m   >10   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       Molybdenum   ppm   ASTM D5185m   90   4       Manganese   ppm   ASTM D5185m   0   <11							
TinppmASTM D5185m>100VanadiumppmASTM D5185mImit/baseCurrentInistory1Inistory2CadmiumppmASTM D5185m00ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185m00BariumppmASTM D5185m04MolybdenumppmASTM D5185m0<11							
Vanadium   ppm   ASTM D5185m   0       Cadmium   ppm   ASTM D5185m   <1							
CadmiumppmASTM D5185m<1ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185m00BariumppmASTM D5185m904MolybdenumppmASTM D5185m0<1					-		
Boron   ppm   ASTM D5185m   0   0       Barium   ppm   ASTM D5185m   90   4       Molybdenum   ppm   ASTM D5185m   0   <1					-		
Barium   ppm   ASTM D5185m   90   4       Molybdenum   ppm   ASTM D5185m   0   <1       Manganese   ppm   ASTM D5185m   0   <1       Magnesium   ppm   ASTM D5185m   100   95       Calcium   ppm   ASTM D5185m   0   1       Calcium   ppm   ASTM D5185m   0   0       Phosphorus   ppm   ASTM D5185m   0   0       Zinc   ppm   ASTM D5185m   0   0       Sulfur   ppm   ASTM D5185m   23500   20656       Sulfur   ppm   ASTM D5185m   >25   1       Sodium   ppm   ASTM D5185m   >20   3       Vater   %   ASTM D5185m	ADDITIVES		method	limit/base	current	history1	history2
Barium   ppm   ASTM D5185m   90   4      Molybdenum   ppm   ASTM D5185m   0   <1	Boron	maa	ASTM D5185m	0	0		
Molybdenum   ppm   ASTM D5185m   0   <1       Manganese   ppm   ASTM D5185m   100   95       Magnesium   ppm   ASTM D5185m   100   95       Calcium   ppm   ASTM D5185m   0   1       Calcium   ppm   ASTM D5185m   0   0       Phosphorus   ppm   ASTM D5185m   0   0       Zinc   ppm   ASTM D5185m   0   0       Sulfur   ppm   ASTM D5185m   23500   206566       Solicon   ppm   ASTM D5185m   >25   1       Solium   ppm   ASTM D5185m   >20   3       Vater   γ   ASTM D6304   >0.05   0.031       ppm Water   γ   ASTM D6304<	Barium			90			
Manganese ppm ASTM D5185m <1     Magnesium ppm ASTM D5185m 100 95     Calcium ppm ASTM D5185m 0 1     Calcium ppm ASTM D5185m 0 0     Phosphorus ppm ASTM D5185m 0 0     Zinc ppm ASTM D5185m 0 0     Sulfur ppm ASTM D5185m 23500 20656     Sulfur ppm ASTM D5185m 225 1     Sodium ppm ASTM D5185m >25 1     Sodium ppm ASTM D5185m >20 3     Vater % ASTM D6304 >0.05 0.031     ppm Water ppm ASTM D6304 >500 319     FLUID CLEANLINESS method limi							
Magnesium   ppm   ASTM D5185m   100   95       Calcium   ppm   ASTM D5185m   0   1       Phosphorus   ppm   ASTM D5185m   0   0       Zinc   ppm   ASTM D5185m   0   0       Sulfur   ppm   ASTM D5185m   23500   20656       CONTAMINANTS   method   limit/base   current   history1   history2     Silicon   ppm   ASTM D5185m   >25   1       Sodium   ppm   ASTM D5185m   >20   3       Potassium   ppm   ASTM D5185m   >20   3       Water   %   ASTM D6304   >0.05   0.031       ppm Water   ppm   ASTM D6304   >500   319       Particles >4µm   ASTM D7647	-						
Calcium   ppm   ASTM D5185m   0   1       Phosphorus   ppm   ASTM D5185m   0   0        Zinc   ppm   ASTM D5185m   0   0        Sulfur   ppm   ASTM D5185m   23500   20656       CONTAMINANTS   method   limit/base   current   history1   history2     Silicon   ppm   ASTM D5185m   >25   1       Sodium   ppm   ASTM D5185m   >25   1       Potassium   ppm   ASTM D5185m   >20   3       Water   %   ASTM D6304   >0.05   0.031       ppm Water   ppm   ASTM D6304   >500   319       FLUID CLEANLINESS   method   limit/base   current   history1   history2     Particles >4µm	-			100			
Phosphorus   ppm   ASTM D5185m   0   0   0       Zinc   ppm   ASTM D5185m   0   0   0       Sulfur   ppm   ASTM D5185m   23500   20656       CONTAMINANTS   method   limit/base   current   history1   history2     Silicon   ppm   ASTM D5185m   >25   1       Sodium   ppm   ASTM D5185m   >25   1       Potassium   ppm   ASTM D5185m   >20   3       Water   %   ASTM D6304   >0.05   0.031       ppm Water   ppm   ASTM D6304   >500   319       FLUID CLEANLINESS   method   limit/base   current   history1   history2     Particles >4µm   ASTM D7647   110780       Particles >6µm   ASTM D7647 </td <td>U</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	U						
Zinc   ppm   ASTM D5185m   0   0       Sulfur   ppm   ASTM D5185m   23500   20656       CONTAMINANTS   method   limit/base   current   history1   history2     Silicon   ppm   ASTM D5185m   >25   1       Sodium   ppm   ASTM D5185m   >25   1       Sodium   ppm   ASTM D5185m   >20   3       Potassium   ppm   ASTM D6304   >0.05   0.031       Water   %   ASTM D6304   >500   319       ppm Water   ppm   ASTM D7647   10780       Particles >4µm   ASTM D7647   >1300   2692							
SulfurppmASTM D5185m2350020656CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>251SodiumppmASTM D5185m>203PotassiumppmASTM D5185m>203Water%ASTM D6304>0.050.031ppm WaterppmASTM D6304>500319FLUID CLEANLINESSmethodlimit/basecurrenthistory1history2Particles >4μmASTM D7647>13002692							
Silicon   ppm   ASTM D5185m   >25   1       Sodium   ppm   ASTM D5185m   <25	-				-		
Sodium   ppm   ASTM D5185m   7       Potassium   ppm   ASTM D5185m   >20   3       Water   %   ASTM D6304   >0.05   0.031       ppm Water   ppm   ASTM D6304   >500   319       FLUID CLEANLINESS   method   limit/base   current   history1   history2     Particles >4μm   ASTM D7647   10780       Particles >6μm   ASTM D7647   >1300   2692	CONTAMINANTS		method	limit/base	current	history1	history2
Sodium   ppm   ASTM D5185m   7       Potassium   ppm   ASTM D5185m   >20   3       Water   %   ASTM D6304   >0.05   0.031       ppm Water   ppm   ASTM D6304   >500   319       FLUID CLEANLINESS   method   limit/base   current   history1   history2     Particles >4μm   ASTM D7647   10780       Particles >6μm    ASTM D7647   10780	Silicon	ppm	ASTM D5185m	>25	1		
Potassium   ppm   ASTM D5185m   >20   3       Water   %   ASTM D6304   >0.05   0.031       ppm Water   ppm   ASTM D6304   >500   319       FLUID CLEANLINESS   method   limit/base   current   history1   history2     Particles >4µm   ASTM D7647   10780       Particles >6µm   ASTM D7647   >1300   2692	Sodium		ASTM D5185m		7		
Water   %   ASTM D6304   >0.05   0.031       ppm Water   ppm   ASTM D6304   >500   319       FLUID CLEANLINESS   method   limit/base   current   history1   history2     Particles >4μm   ASTM D7647   >1300   2692	Potassium			>20	3		
FLUID CLEANLINESS   method   limit/base   current   history1   history2     Particles >4μm   ASTM D7647   10780       Particles >6μm   ASTM D7647   >1300   2692	Water		ASTM D6304	>0.05	0.031		
Particles >4μm   ASTM D7647   10780       Particles >6μm   ASTM D7647   >1300   ▲ 2692	ppm Water	ppm	ASTM D6304	>500	319		
Particles >6μm   ASTM D7647   >1300   ▲ 2692	FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
	Particles >4µm		ASTM D7647		10780		
	Particles >6µm		ASTM D7647	>1300	<u> </u>		
	Particles >14µm		ASTM D7647	>80	<b>A</b> 176		
Particles >21µm ASTM D7647 >20 <b>41</b>	Particles >21µm		ASTM D7647	>20	<u> </u>		
Particles >38µm ASTM D7647 >4 <b>1</b>	Particles >38µm			>4			
Particles >71µm ASTM D7647 >3 0			ASTM D7647	>3	0		
Oil Cleanliness   ISO 4406 (c)   >/17/13   ▲ 21/19/15	Oil Cleanliness						
FLUID DEGRADATION method limit/base current history1 history2	FLUID DEGRADA		method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g ASTM D8045 1.0 0.38	Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.38		

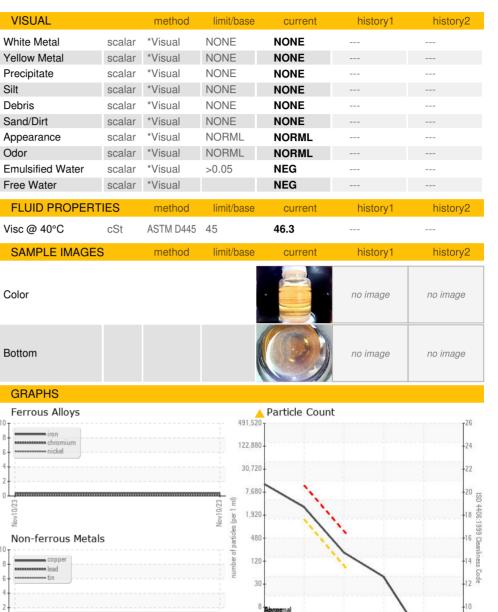


# **OIL ANALYSIS REPORT**

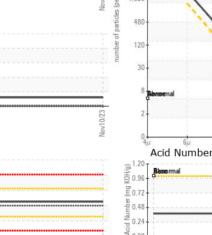










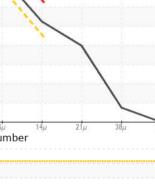


: 24 Nov 2023

: 27 Nov 2023

Diagnostician : Doug Bogart

0.00





### 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.

: KCPA003553

:06016433

Abnorma

Se 35

40

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

: WearCheck USA - 501 Madison Ave., Cary, NC 27513

Received

Diagnosed

AMAZON LAS VEGAS 08

Contact: Service Manager

5801 NARCO WAY

LAS VEGAS, NV

US 89109