



# PROBLEM SUMMARY

Sample Rating Trend

WATER



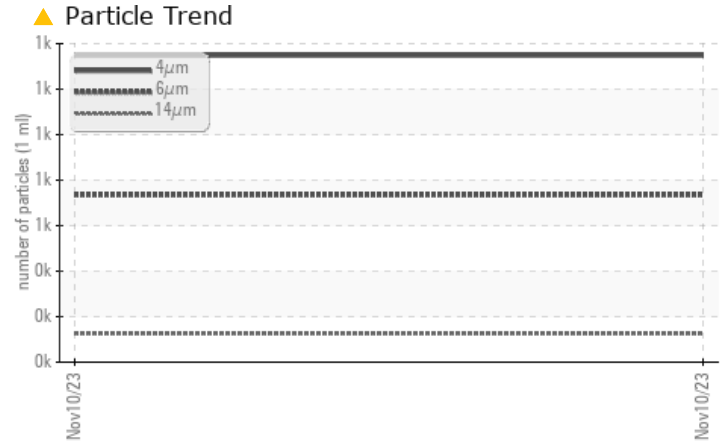
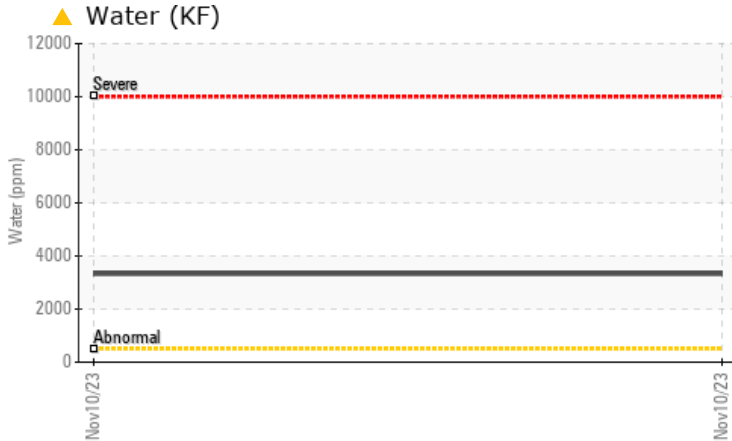
Machine Id  
**3258131 (S/N 1109)**

Component  
**Compressor**

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



## COMPONENT CONDITION SUMMARY



## RECOMMENDATION

The filter change at the time of sampling has been noted. We advise that you stop the unit and follow the water drain-off procedure for this component. We recommend an early resample in 500 hours to monitor this condition.

## PROBLEMATIC TEST RESULTS

Sample Status	Unit	ASTM Standard	Value	SEVERE	---	---
Water	%	ASTM D6304	>0.05	▲ <b>0.333</b>	---	---
ppm Water	ppm	ASTM D6304	>500	▲ <b>3330</b>	---	---
Particles >14µm		ASTM D7647	>80	▲ <b>125</b>	---	---
Particles >21µm		ASTM D7647	>20	▲ <b>42</b>	---	---
Particles >38µm		ASTM D7647	>4	▲ <b>7</b>	---	---
Oil Cleanliness		ISO 4406 (c)	>--/17/13	▲ <b>18/17/14</b>	---	---
Free Water	scalar	*Visual		◆ <b>&gt;10%</b>	---	---

Customer Id: HAMLOS  
Sample No.: KCPA003791  
Lab Number: 06016419  
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
Jonathan Hester +1 919-379-4092 x4092  
[jhester@wearcheckusa.com](mailto:jhester@wearcheckusa.com)

To change component or sample information:  
Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

*There are no recommended actions for this sample.*

## HISTORICAL DIAGNOSIS



# OIL ANALYSIS REPORT

Sample Rating Trend

**WATER**



Machine Id  
**3258131 (S/N 1109)**  
 Component  
**Compressor**  
 Fluid  
**KAESER SIGMA (OEM) M-460 (--- GAL)**



## DIAGNOSIS

### Recommendation

The filter change at the time of sampling has been noted. We advise that you stop the unit and follow the water drain-off procedure for this component. We recommend an early resample in 500 hours to monitor this condition.

### Wear

All component wear rates are normal.

### Contamination

There is a moderate amount of particulates present in the oil. Excessive free water present. There is a moderate concentration of water 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 INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>KCPA003791</b>	---	---
Sample Date	Client Info		<b>10 Nov 2023</b>	---	---
Machine Age	hrs	Client Info	<b>0</b>	---	---
Oil Age	hrs	Client Info	<b>0</b>	---	---
Oil Changed	Client Info		<b>N/A</b>	---	---
Sample Status			<b>SEVERE</b>	---	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >50	<b>3</b>	---	---
Chromium	ppm	ASTM D5185m >10	<b>&lt;1</b>	---	---
Nickel	ppm	ASTM D5185m >3	<b>&lt;1</b>	---	---
Titanium	ppm	ASTM D5185m >3	<b>&lt;1</b>	---	---
Silver	ppm	ASTM D5185m >2	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m >10	<b>2</b>	---	---
Lead	ppm	ASTM D5185m >10	<b>&lt;1</b>	---	---
Copper	ppm	ASTM D5185m >50	<b>7</b>	---	---
Tin	ppm	ASTM D5185m >10	<b>&lt;1</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	---	---
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	---	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>0</b>	---	---
Barium	ppm	ASTM D5185m 90	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m 0	<b>&lt;1</b>	---	---
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185m 100	<b>40</b>	---	---
Calcium	ppm	ASTM D5185m 0	<b>3</b>	---	---
Phosphorus	ppm	ASTM D5185m 0	<b>0</b>	---	---
Zinc	ppm	ASTM D5185m 0	<b>160</b>	---	---
Sulfur	ppm	ASTM D5185m 23500	<b>21351</b>	---	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>1</b>	---	---
Sodium	ppm	ASTM D5185m	<b>8</b>	---	---
Potassium	ppm	ASTM D5185m >20	<b>3</b>	---	---
Water	%	ASTM D6304 >0.05	<b>▲ 0.333</b>	---	---
ppm Water	ppm	ASTM D6304 >500	<b>▲ 3330</b>	---	---

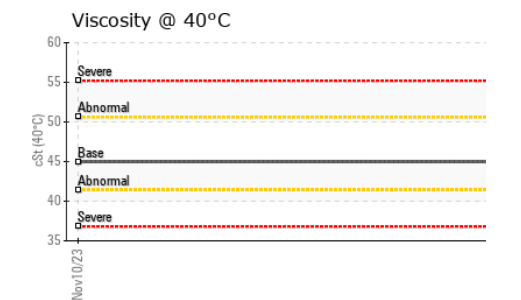
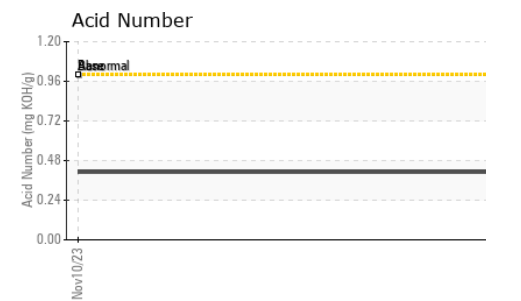
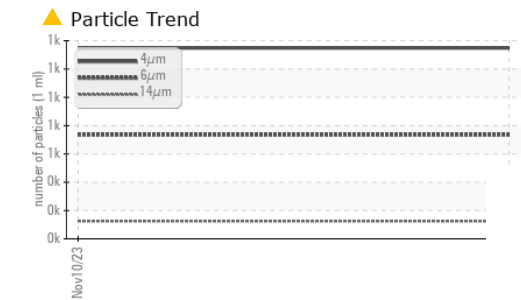
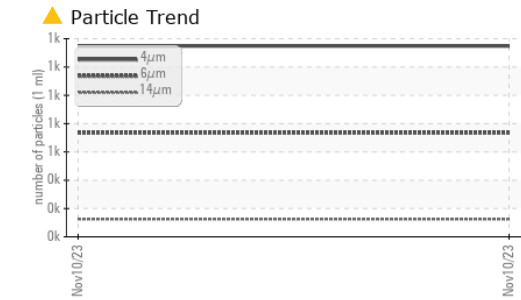
## FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		<b>1348</b>	---	---
Particles >6µm	ASTM D7647	>1300	<b>735</b>	---	---
Particles >14µm	ASTM D7647	>80	<b>▲ 125</b>	---	---
Particles >21µm	ASTM D7647	>20	<b>▲ 42</b>	---	---
Particles >38µm	ASTM D7647	>4	<b>▲ 7</b>	---	---
Particles >71µm	ASTM D7647	>3	<b>1</b>	---	---
Oil Cleanliness	ISO 4406 (c)	>--/17/13	<b>▲ 18/17/14</b>	---	---

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 1.0	<b>0.41</b>	---	---

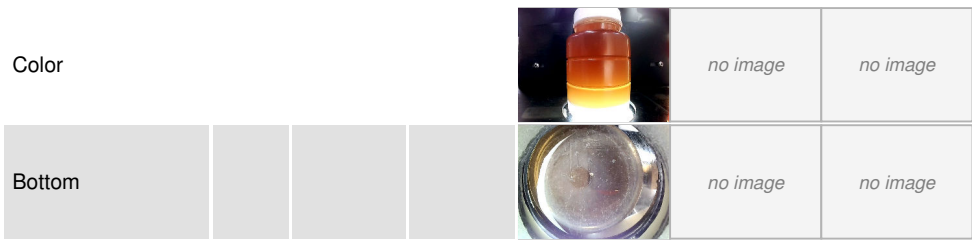
# OIL ANALYSIS REPORT



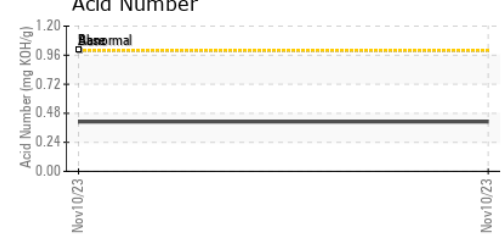
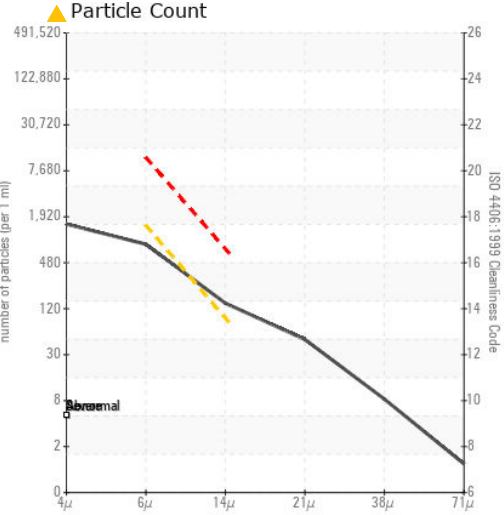
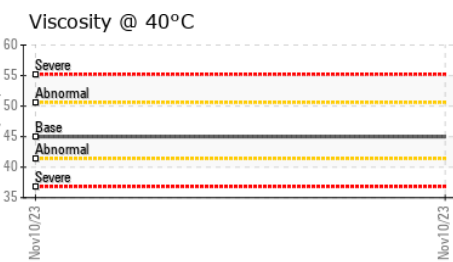
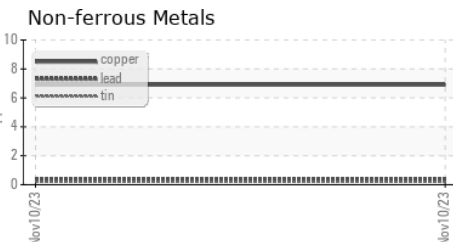
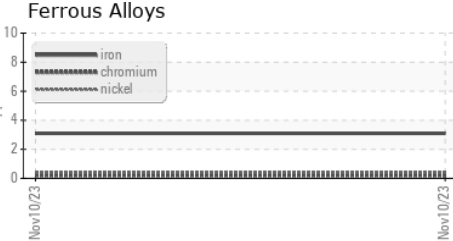
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	<b>NONE</b>	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	---
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	---
Emulsified Water	scalar	*Visual	>0.05	<b>0.2%</b>	---
Free Water	scalar	*Visual		<b>&gt;10%</b>	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	45	<b>45.0</b>	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KCPA003791 **Received** : 24 Nov 2023  
**Lab Number** : 06016419 **Diagnosed** : 01 Dec 2023  
**Unique Number** : 10755563 **Diagnostician** : Jonathan Hester  
**Test Package** : IND 2 ( Additional Tests: KF, PrtCount )

**HAMMERHEAD WOODWORK**  
 2463 FLETCHER DR  
 LOS ANGELES, CA  
 US 90039  
 Contact: Service Manager

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)

T:  
F: