



# PROBLEM SUMMARY

## Sample Rating Trend



ISO



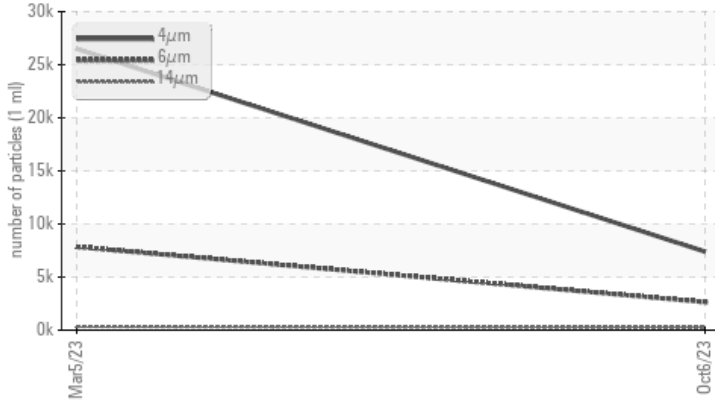
Machine Id  
**8331556 (S/N 1485)**

Component  
**Compressor**

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

## COMPONENT CONDITION SUMMARY

### ▲ Particle Trend



## RECOMMENDATION

The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

Sample Status			<b>ABNORMAL</b>	ABNORMAL	---
Particles >6µm	ASTM D7647	>1300	▲ <b>2638</b>	▲ 7840	---
Particles >14µm	ASTM D7647	>80	▲ <b>223</b>	▲ 334	---
Particles >21µm	ASTM D7647	>20	▲ <b>36</b>	▲ 45	---
Oil Cleanliness	ISO 4406 (c)	>--/17/13	▲ <b>20/19/15</b>	▲ 22/20/16	---

**Customer Id:** TYRHUN  
**Sample No.:** KCPA000865  
**Lab Number:** 05981247  
**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

**05 Mar 2023 Diag: Doug Bogart**

ISO



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. All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report





# OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id  
**8331556 (S/N 1485)**  
 Component  
**Compressor**  
 Fluid  
**KAESER SIGMA (OEM) M-460 (--- GAL)**

## DIAGNOSIS

**Recommendation**  
 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 suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>KCPA000865</b>	KCP54447	---
Sample Date	Client Info			<b>06 Oct 2023</b>	05 Mar 2023	---
Machine Age	hrs	Client Info		<b>10152</b>	5299	---
Oil Age	hrs	Client Info		<b>0</b>	0	---
Oil Changed	Client Info			<b>N/A</b>	Changed	---
Sample Status				<b>ABNORMAL</b>	ABNORMAL	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	<b>0</b>	<1	---
Chromium	ppm	ASTM D5185m	>10	<b>0</b>	0	---
Nickel	ppm	ASTM D5185m	>3	<b>0</b>	0	---
Titanium	ppm	ASTM D5185m	>3	<b>0</b>	0	---
Silver	ppm	ASTM D5185m	>2	<b>0</b>	<1	---
Aluminum	ppm	ASTM D5185m	>10	<b>0</b>	<1	---
Lead	ppm	ASTM D5185m	>10	<b>0</b>	0	---
Copper	ppm	ASTM D5185m	>50	<b>2</b>	8	---
Tin	ppm	ASTM D5185m	>10	<b>0</b>	0	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	---
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	---

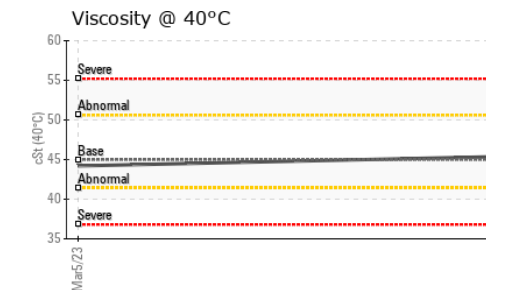
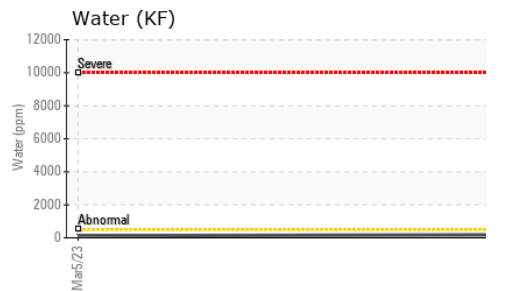
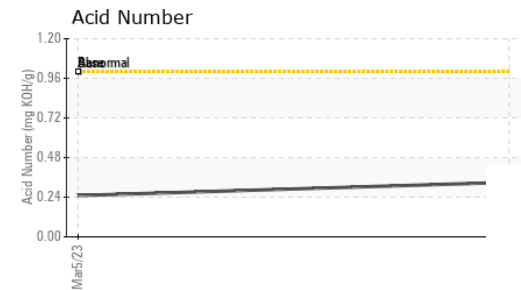
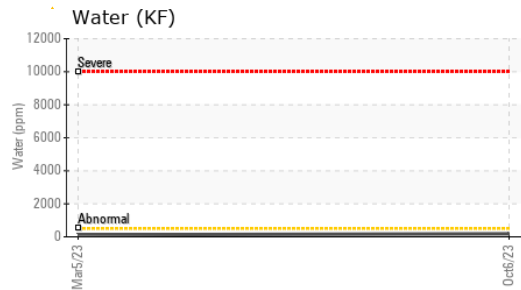
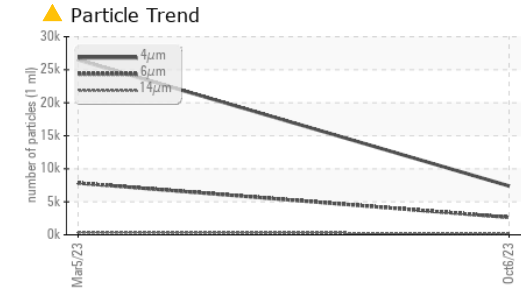
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	<b>0</b>	0	---
Barium	ppm	ASTM D5185m	90	<b>0</b>	<1	---
Molybdenum	ppm	ASTM D5185m	0	<b>0</b>	0	---
Manganese	ppm	ASTM D5185m		<b>0</b>	0	---
Magnesium	ppm	ASTM D5185m	100	<b>24</b>	17	---
Calcium	ppm	ASTM D5185m	0	<b>0</b>	<1	---
Phosphorus	ppm	ASTM D5185m	0	<b>0</b>	6	---
Zinc	ppm	ASTM D5185m	0	<b>0</b>	12	---
Sulfur	ppm	ASTM D5185m	23500	<b>15566</b>	15948	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>3</b>	2	---
Sodium	ppm	ASTM D5185m		<b>7</b>	4	---
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	<1	---
Water	%	ASTM D6304	>0.05	<b>0.018</b>	0.012	---
ppm Water	ppm	ASTM D6304	>500	<b>184.2</b>	126.1	---

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		<b>7396</b>	26497	---
Particles >6µm		ASTM D7647	>1300	<b>▲ 2638</b>	▲ 7840	---
Particles >14µm		ASTM D7647	>80	<b>▲ 223</b>	▲ 334	---
Particles >21µm		ASTM D7647	>20	<b>▲ 36</b>	▲ 45	---
Particles >38µm		ASTM D7647	>4	<b>0</b>	0	---
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	---
Oil Cleanliness		ISO 4406 (c)	>--/17/13	<b>▲ 20/19/15</b>	▲ 22/20/16	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	<b>0.33</b>	0.25	---

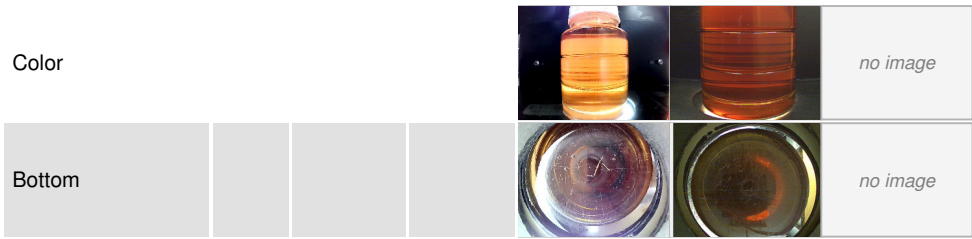
# OIL ANALYSIS REPORT



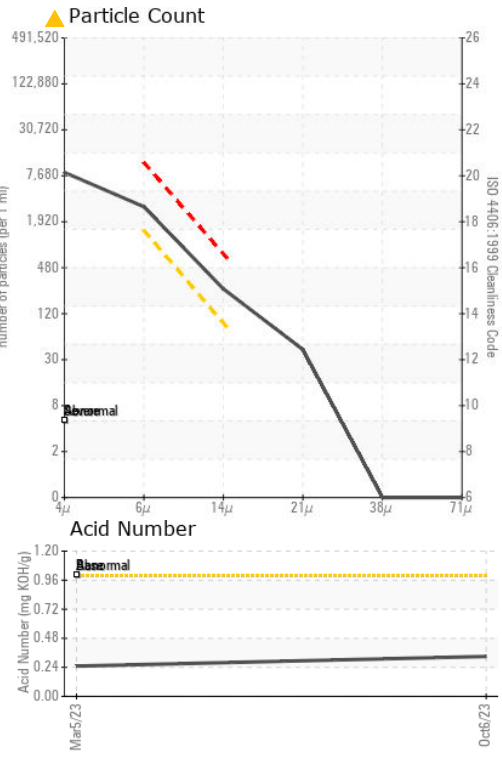
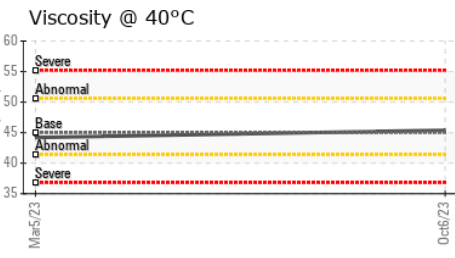
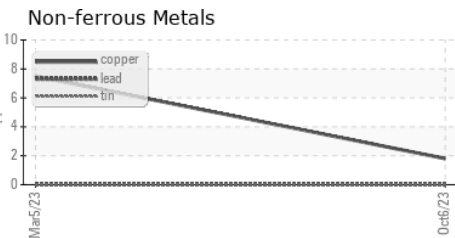
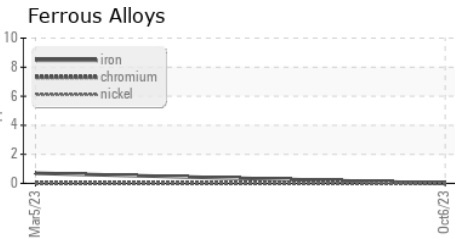
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.05	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	45	44.2	---

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



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KCPA000865 **Received** : 17 Oct 2023  
**Lab Number** : 05981247 **Diagnosed** : 19 Oct 2023  
**Unique Number** : 10698542 **Diagnostician** : Jonathan Hester  
**Test Package** : IND 2 ( Additional Tests: KF, PrtCount )

**TYR SPORTS INC**  
 5600 ARGOSY AVE, UNIT 300  
 HUNTINGTON BEACH, CA  
 US 90740  
 Contact: Service Manager  
 dm@tyr.com

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: