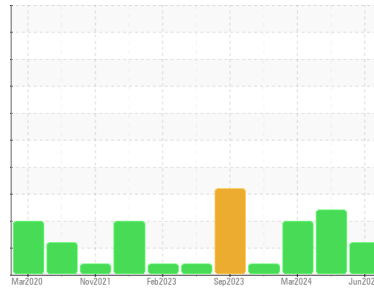




# OIL ANALYSIS REPORT

Sample Rating Trend



**SEDIMENT**



Area  
**[2405-0552]**  
 Machine Id  
**6665019 (S/N 1037)**  
 Component  
**Compressor**  
 Fluid  
**KAESER SIGMA (OEM) S-460 (--- GAL)**

**DIAGNOSIS**

**Recommendation**

We recommend you service the filters on this component. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

**Wear**

All component wear rates are normal.

**Contamination**

Moderate concentration of visible dirt/debris present in the oil. There is a moderate amount of visible silt present in the sample.

**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>KC06212474</b>	KC102230	KC111841
Sample Date	Client Info		<b>01 Jun 2024</b>	01 Jun 2024	12 Mar 2024
Machine Age	hrs	Client Info	<b>14222</b>	14222	13543
Oil Age	hrs	Client Info	<b>0</b>	620	3854
Oil Changed	Client Info		<b>N/A</b>	Not Changd	Changed
Sample Status			<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

**WEAR METALS**

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >50	<b>1</b>	3	0
Chromium	ppm	ASTM D5185m >10	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m >3	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m >3	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >10	<b>6</b>	9	<1
Lead	ppm	ASTM D5185m >10	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >50	<b>10</b>	16	7
Tin	ppm	ASTM D5185m >10	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

**ADDITIVES**

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>0</b>	0	0
Barium	ppm	ASTM D5185m 90	<b>&lt;1</b>	2	0
Molybdenum	ppm	ASTM D5185m	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 90	<b>14</b>	6	<1
Calcium	ppm	ASTM D5185m 2	<b>0</b>	1	0
Phosphorus	ppm	ASTM D5185m	<b>2</b>	1	0
Zinc	ppm	ASTM D5185m	<b>67</b>	56	33

**CONTAMINANTS**

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>&lt;1</b>	<1	0
Sodium	ppm	ASTM D5185m	<b>30</b>	21	5
Potassium	ppm	ASTM D5185m >20	<b>4</b>	3	2
Water	%	ASTM D6304 >0.05	<b>0.015</b>	▲ 0.092	0.004
ppm Water	ppm	ASTM D6304 >500	<b>160</b>	▲ 920	41

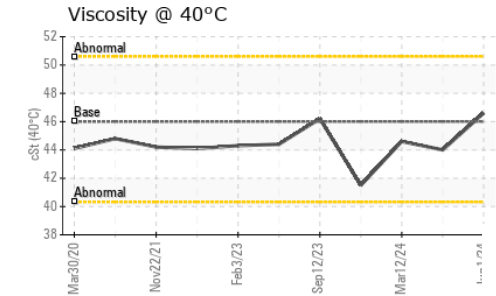
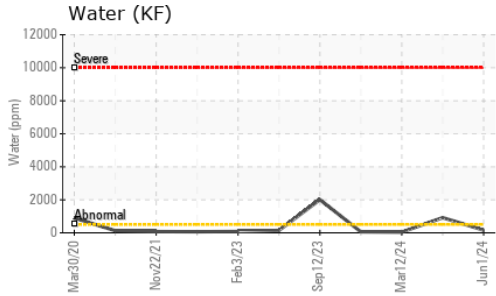
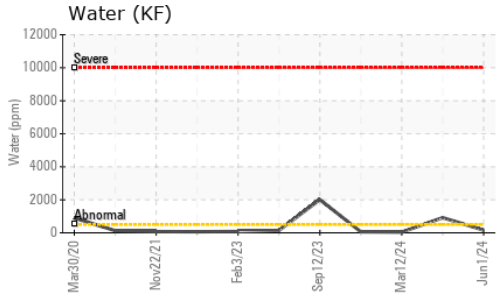
**FLUID CLEANLINESS**

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		---	---	9932
Particles >6µm	ASTM D7647	>1300	---	---	▲ 2879
Particles >14µm	ASTM D7647	>80	---	---	▲ 271
Particles >21µm	ASTM D7647	>20	---	---	▲ 98
Particles >38µm	ASTM D7647	>4	---	---	▲ 11
Particles >71µm	ASTM D7647	>3	---	---	1
Oil Cleanliness	ISO 4406 (c)	>--/17/13	---	---	▲ 20/19/15

**FLUID DEGRADATION**

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.4	<b>0.28</b>	0.31	0.49

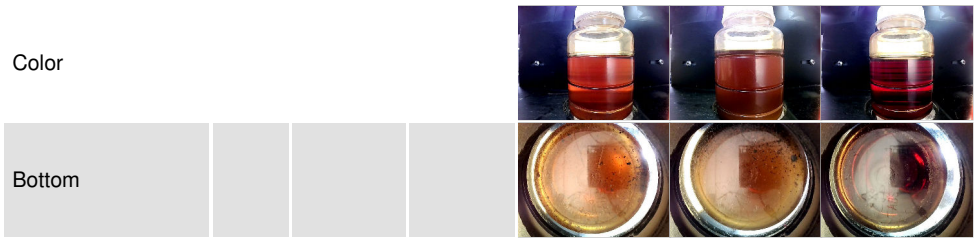
# OIL ANALYSIS REPORT



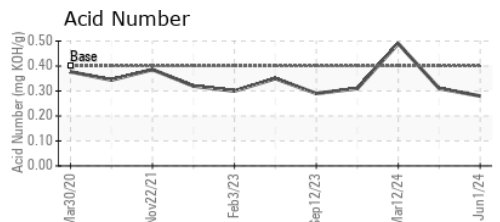
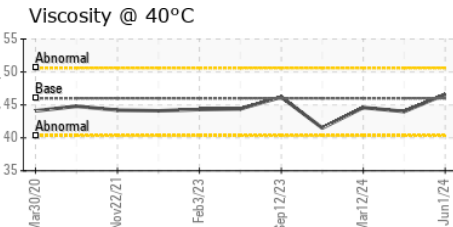
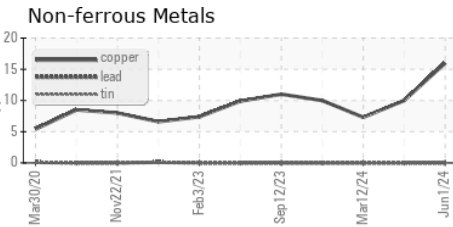
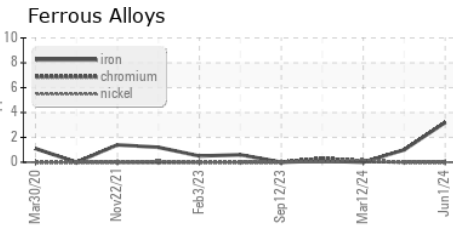
PARAMETER	VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	*Visual	NONE	<b>▲ MODER</b>	▲ MODER	NONE
Debris	scalar	*Visual	NONE	<b>▲ MODER</b>	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	<b>NEG</b>	▲ 0.2%	NEG
Free Water	scalar	*Visual		<b>NEG</b>	NEG	NEG

PARAMETER	method	limit/base	current	history1	history2
FLUID PROPERTIES					
Visc @ 40°C	cSt	ASTM D445 46	<b>46.6</b>	44.0	44.6

PARAMETER	method	limit/base	current	history1	history2
SAMPLE IMAGES					



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KC06212474  
**Lab Number** : 06212474  
**Unique Number** : 11085338  
**Test Package** : IND 2  
**Received** : 17 Jun 2024  
**Tested** : 19 Jun 2024  
**Diagnosed** : 19 Jun 2024 - Don Baldrige

**SPARTAN COMPOSITES**  
 135 GUS HIPP BLVD  
 ROCKLEDGE, FL  
 US 32955  
 Contact: CHRISTINE BARNHART

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)