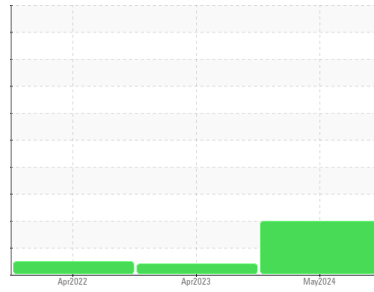




# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id  
**7475227 (S/N 1074)**

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

## DIAGNOSIS

### Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. 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>KCPA016789</b>	KCP52823	KCP45069
Sample Date	Client Info			<b>14 May 2024</b>	13 Apr 2023	25 Apr 2022
Machine Age	hrs	Client Info		<b>9932</b>	6361	2994
Oil Age	hrs	Client Info		<b>4000</b>	3367	2994
Oil Changed	Client Info			<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	<b>1</b>	<1	1
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	1
Aluminum	ppm	ASTM D5185m	>10	<b>2</b>	0	<1
Lead	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m	>50	<b>16</b>	4	2
Tin	ppm	ASTM D5185m	>10	<b>1</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1

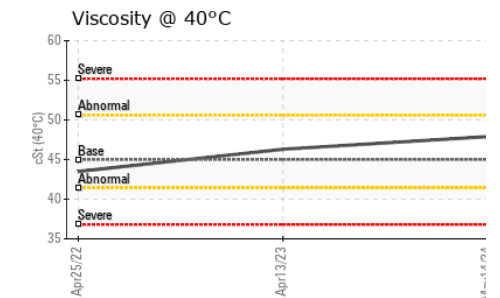
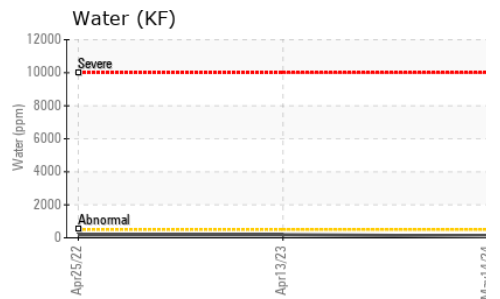
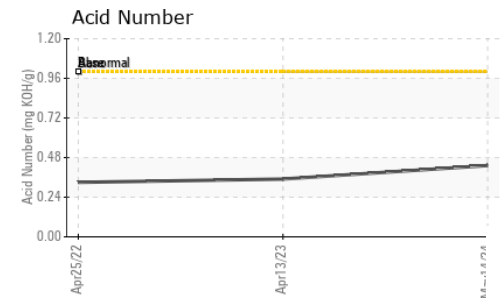
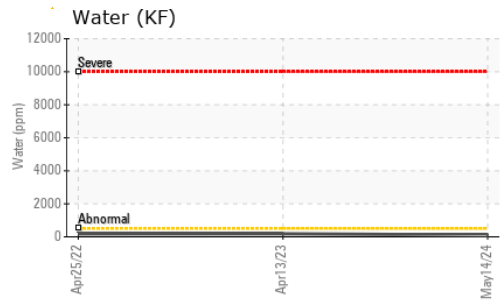
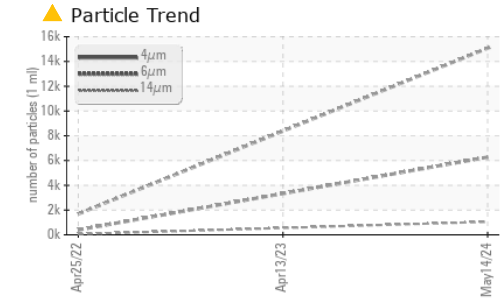
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	<b>0</b>	0	0
Barium	ppm	ASTM D5185m	90	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0	<b>&lt;1</b>	0	0
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m	100	<b>6</b>	30	75
Calcium	ppm	ASTM D5185m	0	<b>4</b>	0	1
Phosphorus	ppm	ASTM D5185m	0	<b>4</b>	<1	3
Zinc	ppm	ASTM D5185m	0	<b>63</b>	34	0
Sulfur	ppm	ASTM D5185m	23500	<b>22341</b>	20298	17693

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>3</b>	1	1
Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	13	9
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	10	6
Water	%	ASTM D6304	>0.05	<b>0.010</b>	0.018	0.018
ppm Water	ppm	ASTM D6304	>500	<b>101</b>	188.3	182.5

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		<b>15078</b>	---	1690
Particles >6µm		ASTM D7647	>1300	<b>▲ 6274</b>	---	397
Particles >14µm		ASTM D7647	>80	<b>▲ 1048</b>	---	56
Particles >21µm		ASTM D7647	>20	<b>▲ 351</b>	---	19
Particles >38µm		ASTM D7647	>4	<b>▲ 10</b>	---	0
Particles >71µm		ASTM D7647	>3	<b>0</b>	---	0
Oil Cleanliness		ISO 4406 (c)	>--/17/13	<b>▲ 21/20/17</b>	---	16/13

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	<b>0.432</b>	0.35	0.33

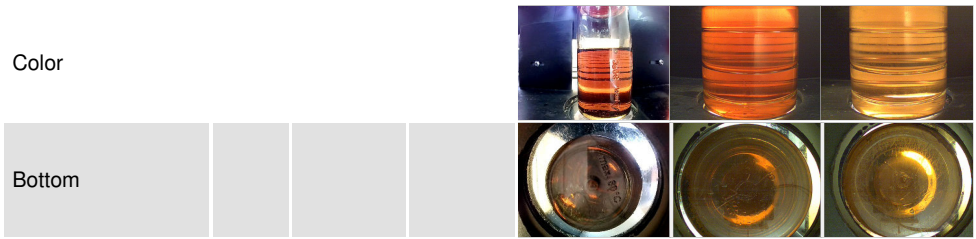
# OIL ANALYSIS REPORT



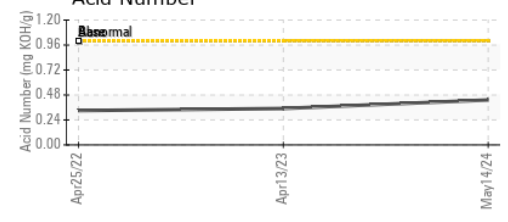
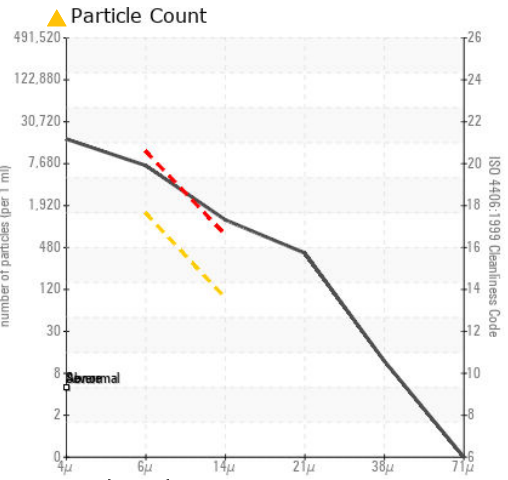
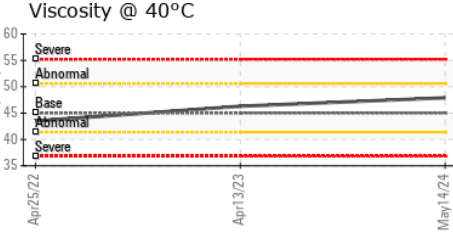
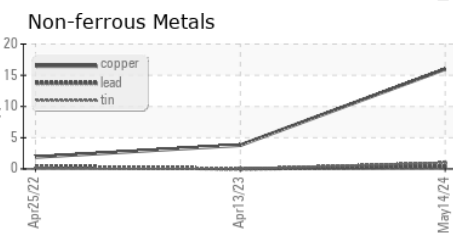
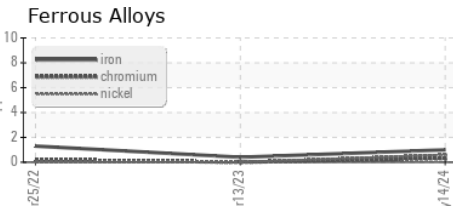
PARAMETER	VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	▲ MODER	NONE
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>	NEG	NEG
Free Water	scalar	*Visual		<b>NEG</b>	NEG	NEG

PARAMETER	FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	45	<b>47.9</b>	46.3	43.5

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



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KCPA016789  
**Lab Number** : 06183361  
**Unique Number** : 11034687  
**Test Package** : IND 2 ( Additional Tests: KF, PrtCount )  
**Received** : 17 May 2024  
**Tested** : 21 May 2024  
**Diagnosed** : 21 May 2024 - Don Baldrige

**HC COMPOSITES**  
 601 STATON RD  
 GREENVILLE, NC  
 US 27834  
 Contact: R. JAMES  
 rjames@worldcat.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)