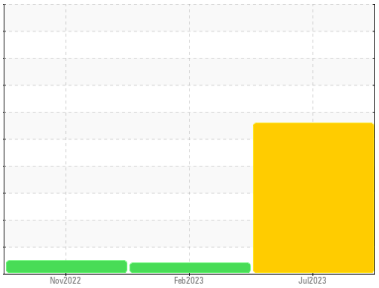
PROBLEM SUMMARY

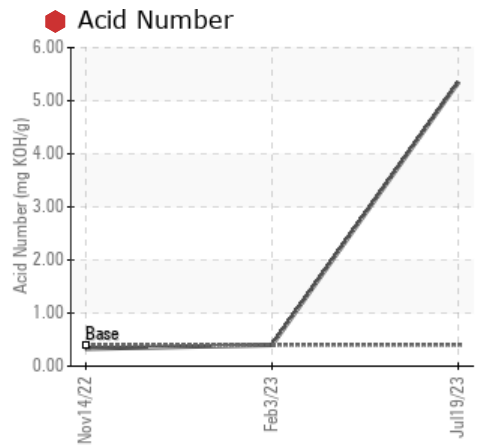
Sample Rating Trend

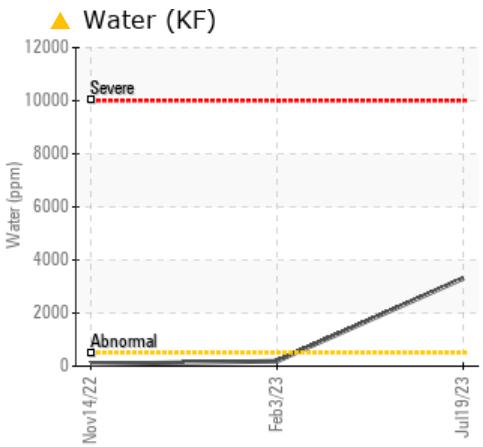


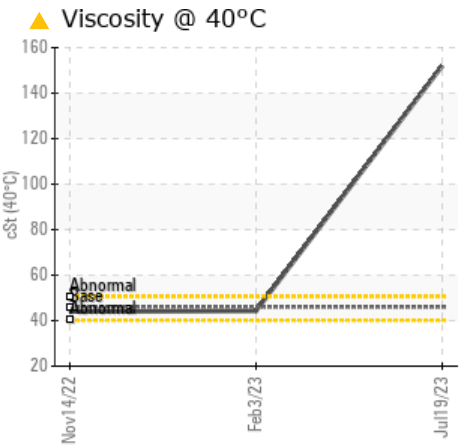
DEGRADATION

Machine Id
7407778 (S/N 1088)
Component
Compressor
Fluid
KAESER SIGMA (OEM) S-460 (--- QTS)

COMPONENT CONDITION SUMMARY







RECOMMENDATION

We advise that you check for a possible overheat condition. The filter change at the time of sampling has been noted. We were unable to perform a particle count due to a high concentration of particles present in this sample. 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				SEVERE	ABNORMAL	NORMAL
Water	%	ASTM D6304	>0.05	▲ **0.331**	0.018	0.007
ppm Water	ppm	ASTM D6304	>500	▲ **3310**	186.3	78.2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.4	⬢ **5.35**	0.40	0.33
Debris	scalar	*Visual	NONE	▲ **MODER**	▲ MODER	LIGHT
Visc @ 40°C	cSt	ASTM D445	46	▲ **152**	44.3	44.0

Customer Id: PPMMOB
Sample No.: KC05960612
Lab Number: 05960612
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

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

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Alert	---	---	?	We were unable to perform a particle count due to a high concentration of particles present in this sample.
Check For Overheating	---	---	?	We advise that you check for a possible overheat condition.

HISTORICAL DIAGNOSIS

03 Feb 2023 Diag: Jonathan Hester

VIS DEBRIS

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.All component wear rates are normal. Moderate concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

14 Nov 2022 Diag: Don Baldridge

NORMAL

Resample at the next service interval to monitor.All component wear rates are normal. The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

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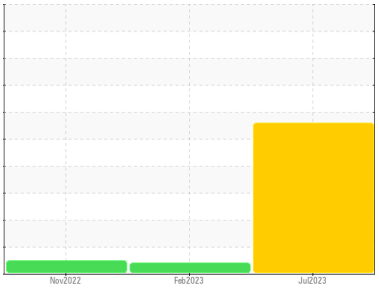
OIL ANALYSIS REPORT

Sample Rating Trend



DEGRADATION

Machine Id
7407778 (S/N 1088)
Component
Compressor
Fluid
KAESER SIGMA (OEM) S-460 (--- QTS)

DIAGNOSIS

Recommendation
We advise that you check for a possible overheat condition. The filter change at the time of sampling has been noted. We were unable to perform a particle count due to a high concentration of particles present in this sample. 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
Moderate concentration of visible dirt/debris present in the oil. There is a moderate concentration of water present in the oil.

Fluid Condition
The AN level is above the recommended limit. The oil viscosity is higher than normal.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**KC05960612**	KC05919263	KC96134
Sample Date		Client Info		**19 Jul 2023**	03 Feb 2023	14 Nov 2022
Machine Age	hrs	Client Info		**19014**	16423	14720
Oil Age	hrs	Client Info		**0**	0	6000
Oil Changed		Client Info		**N/A**	N/A	Changed
Sample Status				**SEVERE**	ABNORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	**18**	0	0
Chromium	ppm	ASTM D5185m	>10	**0**	0	0
Nickel	ppm	ASTM D5185m	>3	**0**	0	0
Titanium	ppm	ASTM D5185m	>3	**0**	0	0
Silver	ppm	ASTM D5185m	>2	**<1**	<1	0
Aluminum	ppm	ASTM D5185m	>10	**0**	0	0
Lead	ppm	ASTM D5185m	>10	**0**	0	0
Copper	ppm	ASTM D5185m	>50	**1**	11	8
Tin	ppm	ASTM D5185m	>10	**<1**	0	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**2**	0	0
Barium	ppm	ASTM D5185m	90	**0**	0	1
Molybdenum	ppm	ASTM D5185m		**<1**	0	0
Manganese	ppm	ASTM D5185m		**<1**	0	0
Magnesium	ppm	ASTM D5185m	90	**8**	0	<1
Calcium	ppm	ASTM D5185m	2	**20**	0	0
Phosphorus	ppm	ASTM D5185m		**23**	0	4
Zinc	ppm	ASTM D5185m		**2**	0	0

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**<1**	<1	0
Sodium	ppm	ASTM D5185m		**8**	0	0
Potassium	ppm	ASTM D5185m	>20	**2**	<1	<1
Water	%	ASTM D6304	>0.05	▲ **0.331**	0.018	0.007
ppm Water	ppm	ASTM D6304	>500	▲ **3310**	186.3	78.2

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		**---**	---	2420
Particles >6µm		ASTM D7647	>1300	**---**	---	436
Particles >14µm		ASTM D7647	>80	**---**	---	35
Particles >21µm		ASTM D7647	>20	**---**	---	16
Particles >38µm		ASTM D7647	>4	**---**	---	3
Particles >71µm		ASTM D7647	>3	**---**	---	1
Oil Cleanliness		ISO 4406 (c)	>--/17/13	**---**	---	18/16/12

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.4	⬢ **5.35**	0.40	0.33

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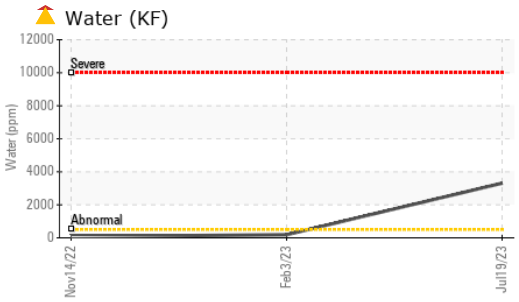
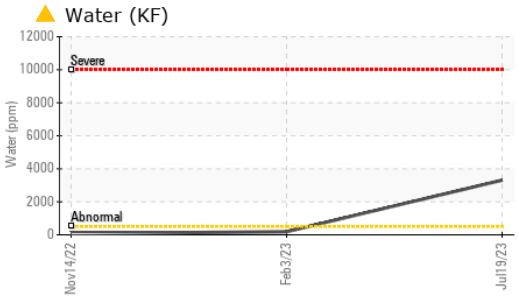
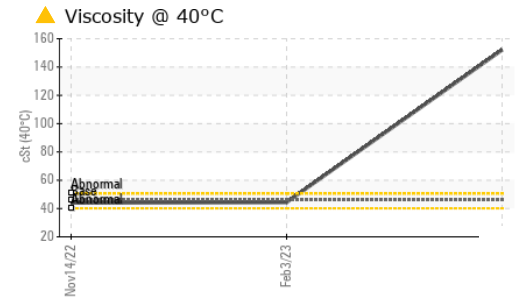
OIL ANALYSIS REPORT

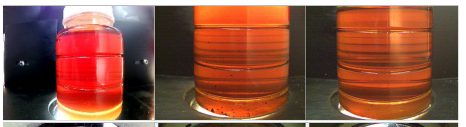
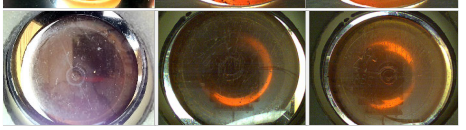




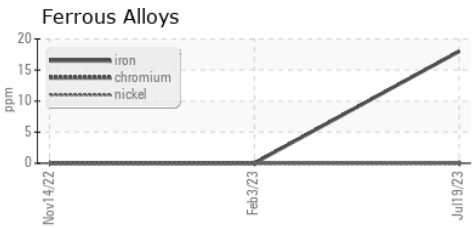


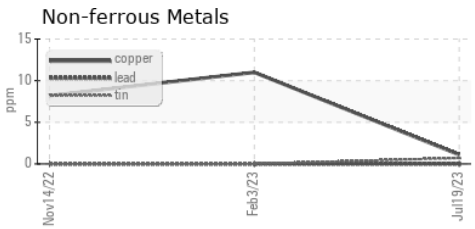
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	▲ **MODER**	▲ MODER	LIGHT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

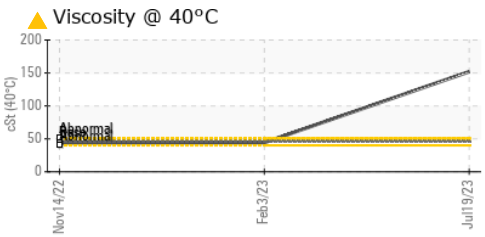
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46	▲ **152**	44.3	44.0

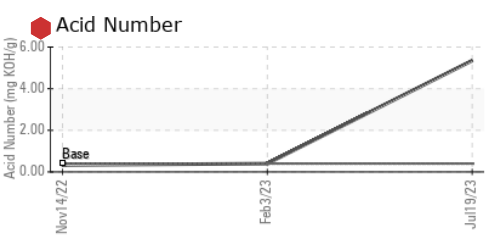
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS









Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KC05960612
Lab Number : 05960612
Unique Number : 10661825
Test Package : IND 2

Received : 25 Sep 2023
Diagnosed : 27 Sep 2023
Diagnostician : Jonathan Hester

PPM SPIRE
3350 SUNCREST RD
MOBILE, AL
US 36613
Contact: Service Manager
T:
F:

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)