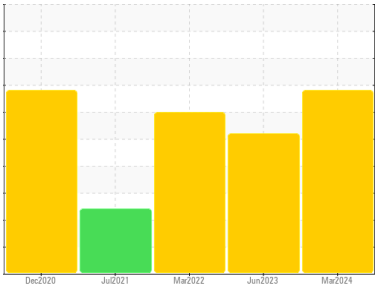
PROBLEM SUMMARY

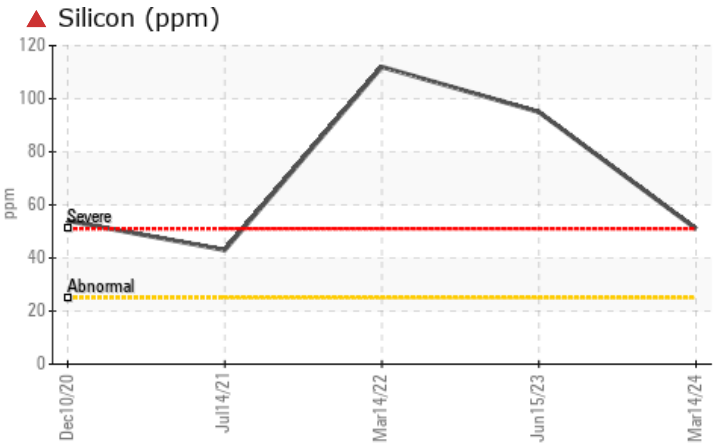
Sample Rating Trend

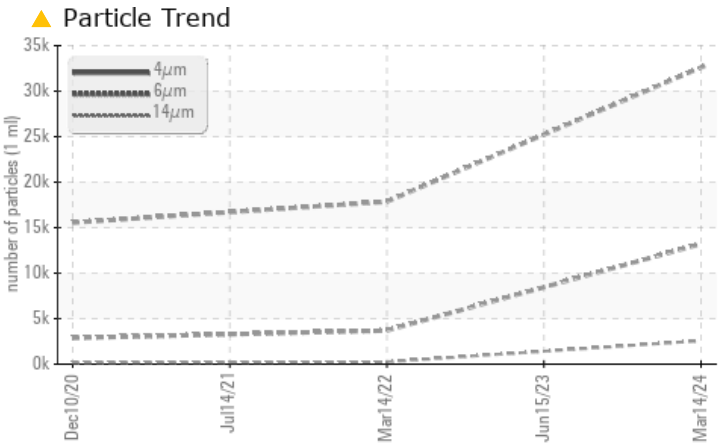


DIRT

Machine Id
2519476 (S/N 1177)
Component
Compressor
Fluid
KAESER SIGMA (OEM) M-460 (--- GAL)

COMPONENT CONDITION SUMMARY





RECOMMENDATION

We advise that you check all areas where dirt can enter the system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	SEVERE	SEVERE
Silicon	ppm	ASTM D5185m	>25	▲ **51**	▲ 95	▲ 112
Particles >6µm		ASTM D7647	>1300	▲ **13210**	---	▲ 3692
Particles >14µm		ASTM D7647	>80	▲ **2570**	---	▲ 250
Particles >21µm		ASTM D7647	>20	▲ **1039**	---	▲ 69
Particles >38µm		ASTM D7647	>4	▲ **65**	---	3
Oil Cleanliness		ISO 4406 (c)	>--/17/13	▲ **22/21/19**	---	▲ 19/15

Customer Id: CALREN
Sample No.: KCPA014954
Lab Number: 06125665
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Don Baldridge +1
don.b505@comcast.net

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

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Dirt Access	---	---	?	We advise that you check all areas where dirt can enter the system.

HISTORICAL DIAGNOSIS

15 Jun 2023 Diag: Angela Borella

DIRT

The filter change at the time of sampling has been noted. 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. Elemental level of silicon (Si) above normal indicating ingress of seal material. Moderate concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

view report

14 Mar 2022 Diag: Don Baldridge

DIRT

We advise that you check all areas where dirt can enter the system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.All component wear rates are normal. There is a high amount of particulates present in the oil. Elemental level of silicon (Si) above normal. The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

view report

14 Jul 2021 Diag: Jonathan Hester

DIRT

Oil and filter change at the time of sampling has been noted. 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. Elemental level of silicon (Si) above normal indicating ingress of seal material. Moderate concentration of visible dirt/debris present in the oil. The oil viscosity is higher than normal. The AN level is acceptable for this fluid.

view report

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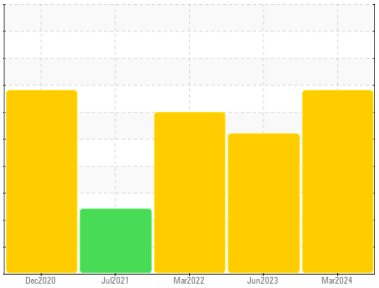
OIL ANALYSIS REPORT

Sample Rating Trend



DIRT

Machine Id
2519476 (S/N 1177)
Component
Compressor
Fluid
KAESER SIGMA (OEM) M-460 (--- GAL)

DIAGNOSIS

▲ Recommendation
We advise that you check all areas where dirt can enter the system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear
All component wear rates are normal.

▲ Contamination
There is a high amount of particulates present in the oil. Elemental level of silicon (Si) above normal.

Fluid Condition
The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**KCPA014954**	KCPA002457	KCP41072
Sample Date		Client Info		**14 Mar 2024**	15 Jun 2023	14 Mar 2022
Machine Age	hrs	Client Info		**70307**	65687	59545
Oil Age	hrs	Client Info		**4620**	0	0
Oil Changed		Client Info		**Changed**	N/A	Changed
Sample Status				**SEVERE**	SEVERE	SEVERE

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	**0**	0	0
Chromium	ppm	ASTM D5185m	>10	**0**	0	0
Nickel	ppm	ASTM D5185m	>3	**0**	<1	0
Titanium	ppm	ASTM D5185m	>3	**0**	0	0
Silver	ppm	ASTM D5185m	>2	**<1**	0	<1
Aluminum	ppm	ASTM D5185m	>10	**0**	0	0
Lead	ppm	ASTM D5185m	>10	**0**	0	0
Copper	ppm	ASTM D5185m	>50	**11**	23	19
Tin	ppm	ASTM D5185m	>10	**0**	0	0
Antimony	ppm	ASTM D5185m		**---**	---	---
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	0	**0**	0	0
Barium	ppm	ASTM D5185m	90	**0**	0	0
Molybdenum	ppm	ASTM D5185m	0	**0**	0	0
Manganese	ppm	ASTM D5185m		**0**	0	0
Magnesium	ppm	ASTM D5185m	100	**0**	2	0
Calcium	ppm	ASTM D5185m	0	**0**	0	0
Phosphorus	ppm	ASTM D5185m	0	**0**	0	5
Zinc	ppm	ASTM D5185m	0	**0**	0	0
Sulfur	ppm	ASTM D5185m	23500	**18468**	20818	16808

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	▲ **51**	▲ 95	▲ 112
Sodium	ppm	ASTM D5185m		**2**	0	0
Potassium	ppm	ASTM D5185m	>20	**0**	<1	0
Water	%	ASTM D6304	>0.05	**0.003**	0.004	0.003
ppm Water	ppm	ASTM D6304	>500	**27**	46.8	28.9

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		**32603**	---	17853
Particles >6µm		ASTM D7647	>1300	▲ **13210**	---	▲ 3692
Particles >14µm		ASTM D7647	>80	▲ **2570**	---	▲ 250
Particles >21µm		ASTM D7647	>20	▲ **1039**	---	▲ 69
Particles >38µm		ASTM D7647	>4	▲ **65**	---	3
Particles >71µm		ASTM D7647	>3	**2**	---	0
Oil Cleanliness		ISO 4406 (c)	>--/17/13	▲ **22/21/19**	---	▲ 19/15

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	**0.70**	0.49	0.46

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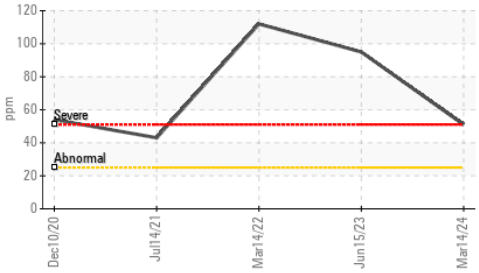
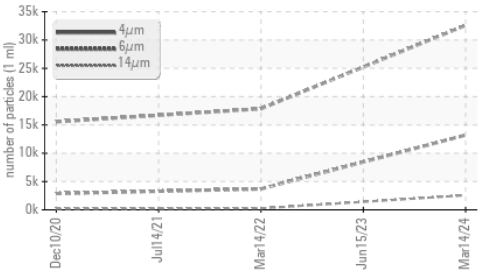
OIL ANALYSIS REPORT

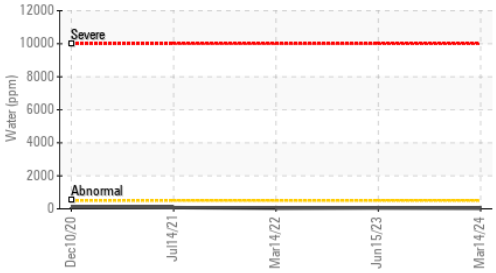
Silicon (ppm)



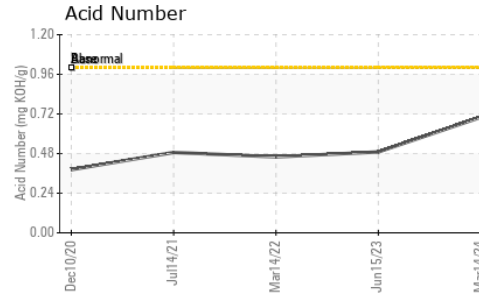
Particle Trend



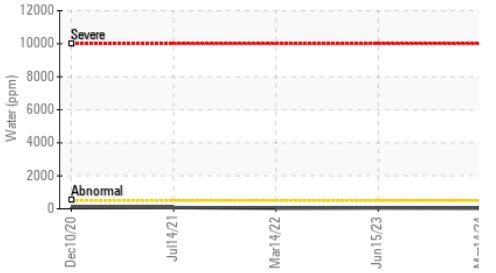
Water (KF)



Acid Number

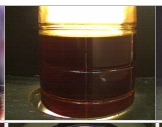
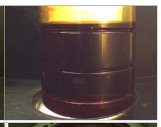
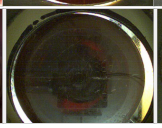
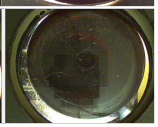


Water (KF)



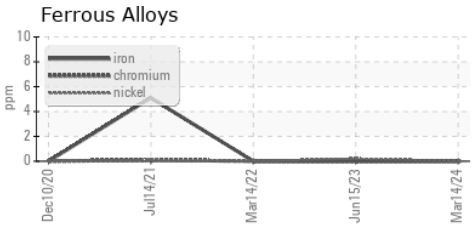
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	▲ MODER	NONE
Sand/Dirt	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	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	45	**53.0**	48.9	50.0

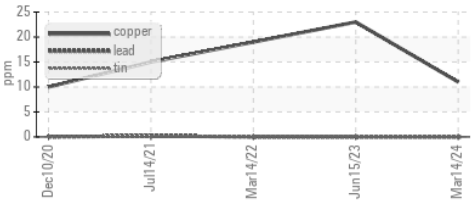
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

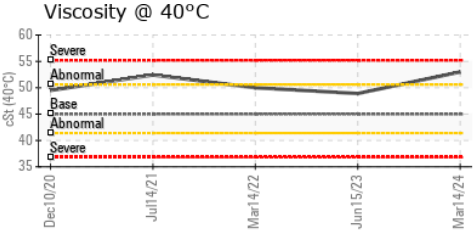
Ferrous Alloys



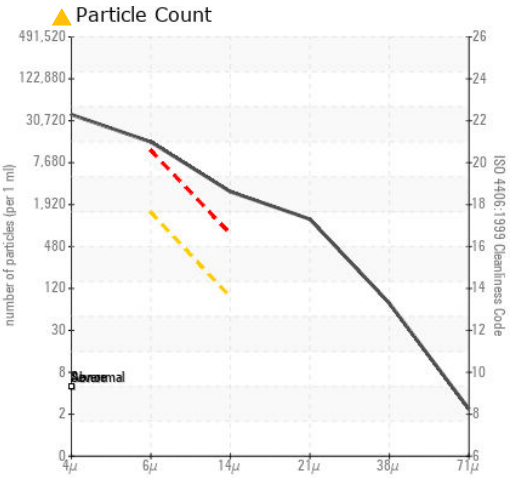
Non-ferrous Metals



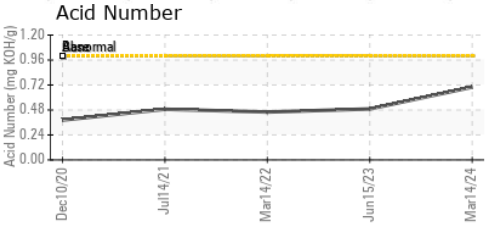
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCPA014954 **Received** : 21 Mar 2024
Lab Number : 06125665 **Tested** : 25 Mar 2024
Unique Number : 10939816 **Diagnosed** : 25 Mar 2024 - Don Baldridge
Test Package : IND 2 (Additional Tests: KF, PrtCount)

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)

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