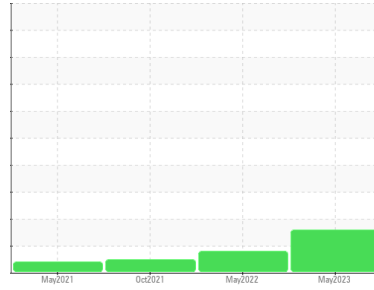




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id

KAESER 7478838

Component

Compressor

Fluid

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

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. 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			KCP53294	KCP45498	KCP39364
Sample Date	Client Info			02 May 2023	02 May 2022	15 Oct 2021
Machine Age	hrs	Client Info		853	816	815
Oil Age	hrs	Client Info		853	400	100
Oil Changed	Client Info			Not Changed	Changed	Changed
Sample Status				ABNORMAL	ATTENTION	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	0	<1	<1
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	0	0	<1
Aluminum	ppm	ASTM D5185m	>10	0	<1	0
Lead	ppm	ASTM D5185m	>10	0	<1	<1
Copper	ppm	ASTM D5185m	>50	<1	<1	<1
Tin	ppm	ASTM D5185m	>10	0	0	0
Antimony	ppm	ASTM D5185m		---	---	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	0	0	<1	<1
Barium	ppm	ASTM D5185m	90	75	83	60
Molybdenum	ppm	ASTM D5185m	0	0	0	0
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	100	83	86	70
Calcium	ppm	ASTM D5185m	0	0	3	<1
Phosphorus	ppm	ASTM D5185m	0	4	6	3
Zinc	ppm	ASTM D5185m	0	0	2	0
Sulfur	ppm	ASTM D5185m	23500	22429	14626	14661

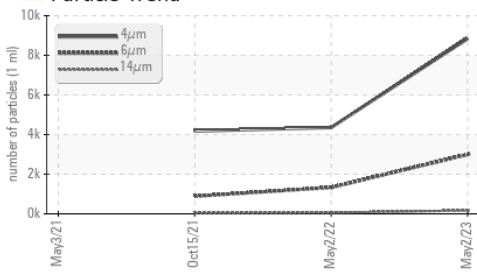
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	0	<1	<1
Sodium	ppm	ASTM D5185m		5	<1	0
Potassium	ppm	ASTM D5185m	>20	<1	2	<1
Water	%	ASTM D6304	>0.05	0.018	0.027	0.042
ppm Water	ppm	ASTM D6304	>500	182.2	276.5	426.8

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		8843	4356	4177
Particles >6µm		ASTM D7647	>1300	▲ 3000	● 1331	884
Particles >14µm		ASTM D7647	>80	▲ 167	56	30
Particles >21µm		ASTM D7647	>20	▲ 23	14	6
Particles >38µm		ASTM D7647	>4	1	0	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>--/17/13	▲ 20/19/15	● 19/18/13	17/12

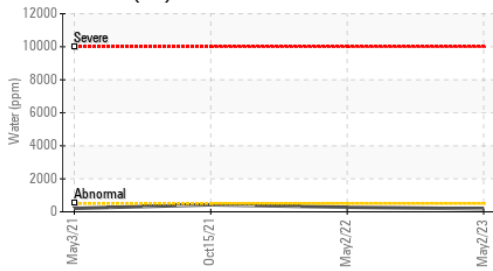
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.28	0.35	0.332

OIL ANALYSIS REPORT

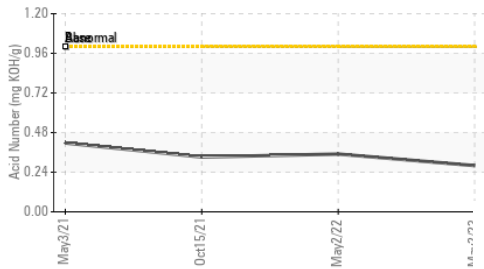
Particle Trend



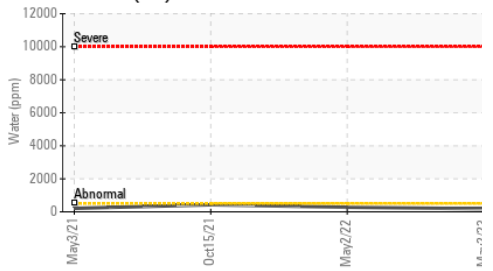
Water (KF)



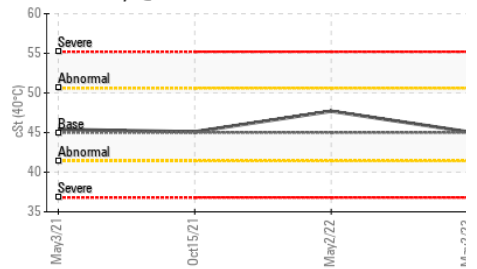
Acid Number



Water (KF)



Viscosity @ 40°C



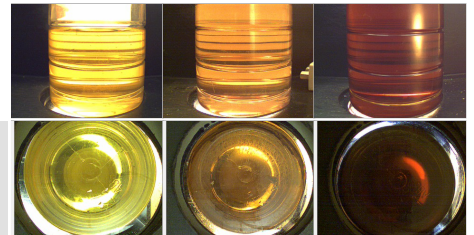
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 45	45.1	47.7	45.1

SAMPLE IMAGES	method	limit/base	current	history1	history2
---------------	--------	------------	---------	----------	----------

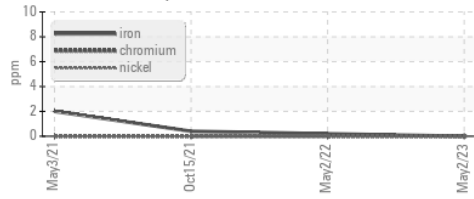
Color

Bottom

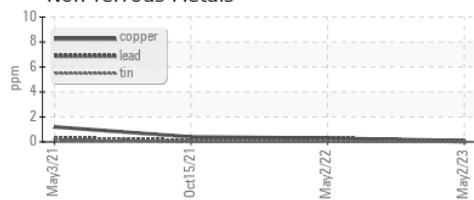


GRAPHS

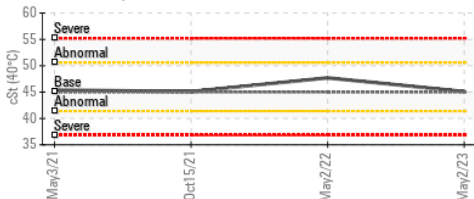
Ferrous Alloys



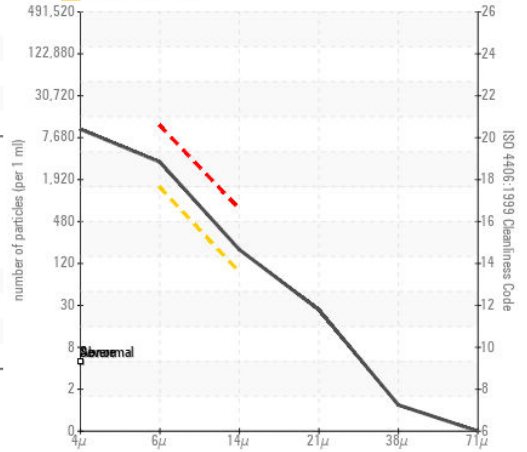
Non-ferrous Metals



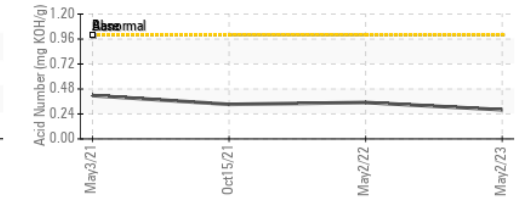
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : KCP53294

Lab Number : 05840732

Unique Number : 10459535

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)

Received : 08 May 2023

Tested : 10 May 2023

Diagnosed : 10 May 2023 - Doug Bogart

FEDEX

145 PINNACLE DR

ROMEVILLE, IL

US 60446

Contact: CYNTHIA GEORGE

CYNTHIA.GEORGE@FEDEX.COM

T:

F: