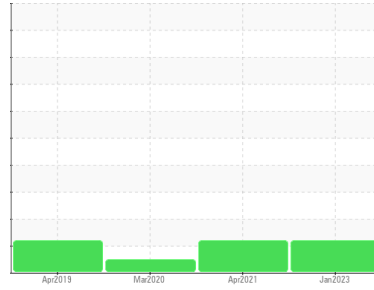


PROBLEM SUMMARY

Sample Rating Trend



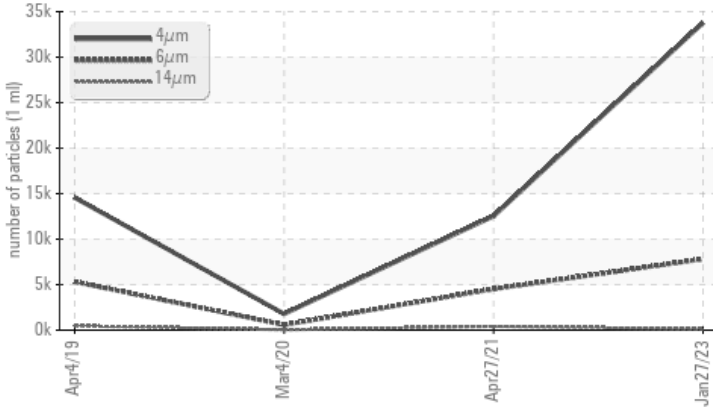
ISO



Machine Id
KAESER AS 20T 6269981 (S/N 1048)
Component
Compressor
Fluid
KAESER SIGMA (OEM) M-460 (--- GAL)

COMPONENT CONDITION SUMMARY

▲ Particle Trend



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.

PROBLEMATIC TEST RESULTS

Sample Status			ABNORMAL	ABNORMAL	NORMAL
Particles >6µm	ASTM D7647	>1300	▲ 7808	▲ 4520	577
Particles >14µm	ASTM D7647	>80	▲ 111	▲ 411	37
Oil Cleanliness	ISO 4406 (c)	>--/17/13	▲ 22/20/14	▲ 19/16	16/12

Customer Id: MARFORCO
Sample No.: KCP54877
Lab Number: 05768117
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
Doug Bogart +1 (800)237-1369 x4016
dougb@wearcheckusa.com

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

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

27 Apr 2021 Diag: Don Baldrige

ISO



We recommend you service the filters on this component. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



04 Mar 2020 Diag: Don Baldrige

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



04 Apr 2019 Diag: Don Baldrige

ISO



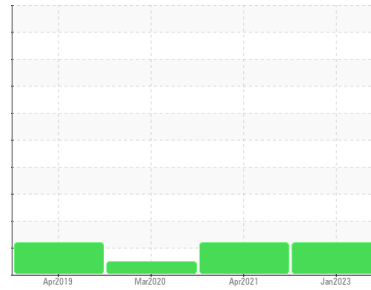
No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
KAESER AS 20T 6269981 (S/N 1048)

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		KCP54877	KCP32684	KCP26173
Sample Date	Client Info		27 Jan 2023	27 Apr 2021	04 Mar 2020
Machine Age	hrs	Client Info	14841	7765	4688
Oil Age	hrs	Client Info	0	3077	4000
Oil Changed	Client Info		Not Chngd	N/A	Changed
Sample Status			ABNORMAL	ABNORMAL	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >50	2	<1	1
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	0	0	0
Aluminum	ppm	ASTM D5185m >10	0	<1	<1
Lead	ppm	ASTM D5185m >10	0	<1	0
Copper	ppm	ASTM D5185m >50	13	3	5
Tin	ppm	ASTM D5185m >10	0	0	0
Antimony	ppm	ASTM D5185m	---	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 0	0	23	<1
Barium	ppm	ASTM D5185m 90	0	32	20
Molybdenum	ppm	ASTM D5185m 0	0	0	0
Manganese	ppm	ASTM D5185m	0	0	<1
Magnesium	ppm	ASTM D5185m 100	1	64	61
Calcium	ppm	ASTM D5185m 0	0	0	2
Phosphorus	ppm	ASTM D5185m 0	5	3	1
Zinc	ppm	ASTM D5185m 0	0	5	11
Sulfur	ppm	ASTM D5185m 23500	17833	20903	17341

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<1	2	0
Sodium	ppm	ASTM D5185m	0	21	24
Potassium	ppm	ASTM D5185m >20	<1	1	<1
Water	%	ASTM D6304 >0.05	0.009	0.028	0.009
ppm Water	ppm	ASTM D6304 >500	99.2	286.3	96.4

FLUID CLEANLINESS

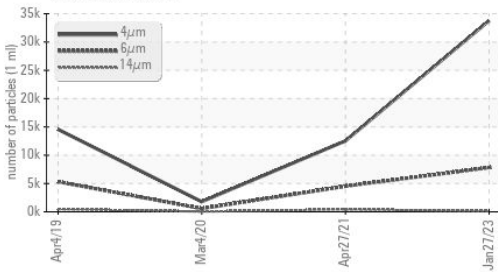
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		33770	12532	1785
Particles >6µm	ASTM D7647	>1300	▲ 7808	▲ 4520	577
Particles >14µm	ASTM D7647	>80	▲ 111	▲ 411	37
Particles >21µm	ASTM D7647	>20	10	▲ 105	9
Particles >38µm	ASTM D7647	>4	1	3	0
Particles >71µm	ASTM D7647	>3	1	0	0
Oil Cleanliness	ISO 4406 (c)	>--/17/13	▲ 22/20/14	▲ 19/16	16/12

FLUID DEGRADATION

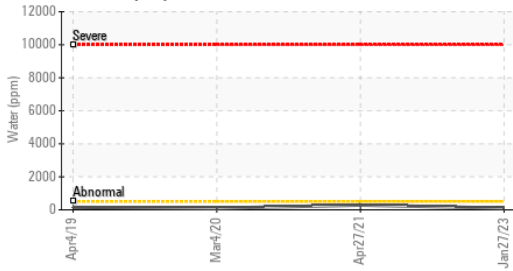
	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 1.0	0.41	0.393	0.365

OIL ANALYSIS REPORT

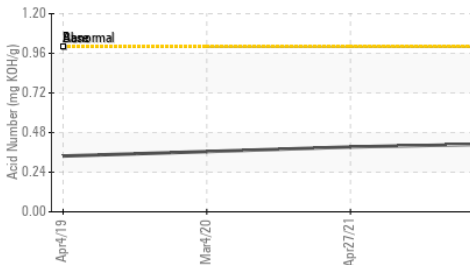
Particle Trend



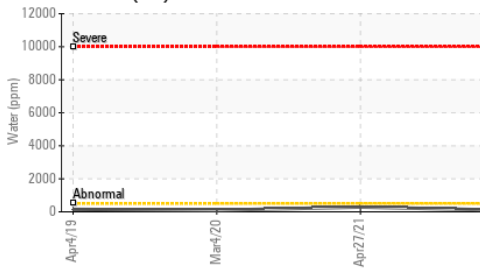
Water (KF)



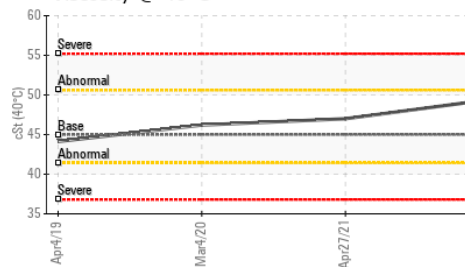
Acid Number



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

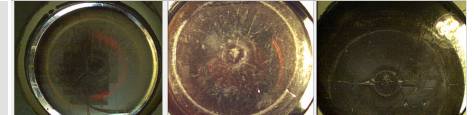
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 45	49.4	47.0	46.2

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

Color

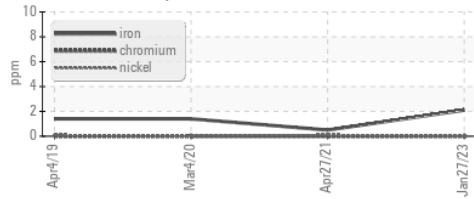


Bottom

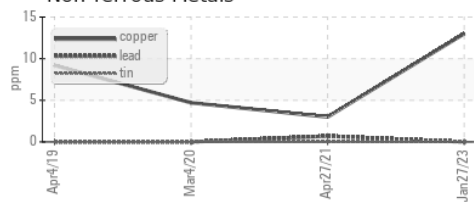


GRAPHS

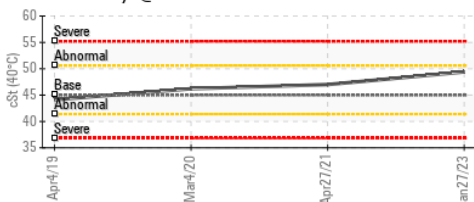
Ferrous Alloys



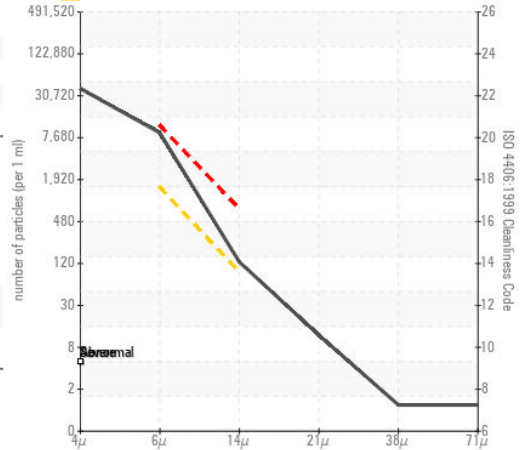
Non-ferrous Metals



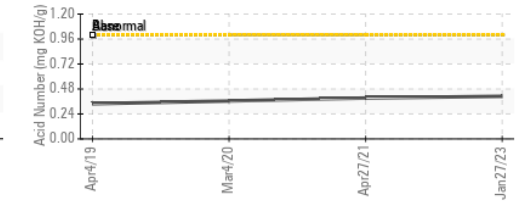
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCP54877 **Received** : 15 Feb 2023
Lab Number : 05768117 **Diagnosed** : 16 Feb 2023
Unique Number : 10337725 **Diagnostician** : Doug Bogart
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)

MARKLEY MOTORS

3401 S COLLEGE AVE
FORT COLLINS, CO
US 80525

Contact: G. DEGROOT
gdegroot@markleymotors.com

T:
F: