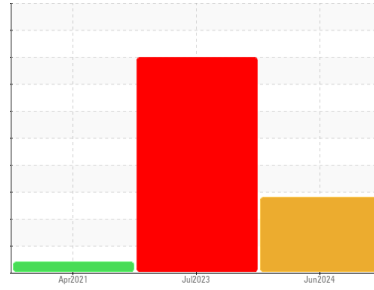




OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id

KAESER 1653215

Component

Compressor

Fluid

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

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

The copper level is abnormal. All other 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 acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			KCPA017869	KCPA004405	KCP32295
Sample Date	Client Info			04 Jun 2024	12 Jul 2023	19 Apr 2021
Machine Age	hrs	Client Info		132197	124336	104867
Oil Age	hrs	Client Info		0	0	2000
Oil Changed	Client Info			Changed	N/A	Changed
Sample Status				ABNORMAL	SEVERE	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	0	0	<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	0	0
Lead	ppm	ASTM D5185m	>10	0	0	<1
Copper	ppm	ASTM D5185m	>50	▲ 144	▲ 328	7
Tin	ppm	ASTM D5185m	>10	0	<1	0
Antimony	ppm	ASTM D5185m		---	---	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

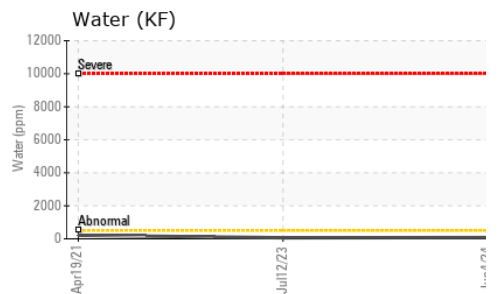
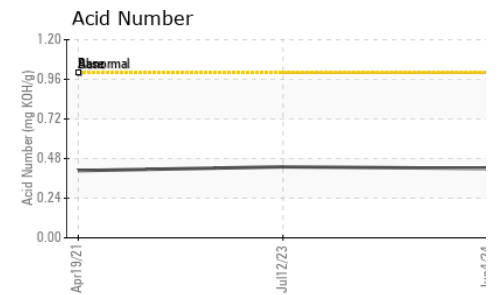
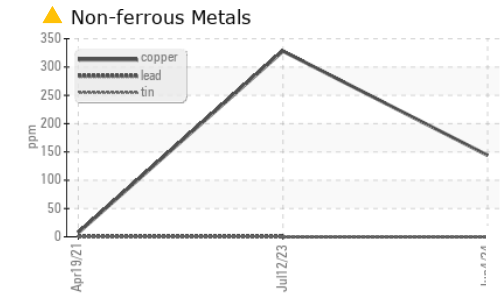
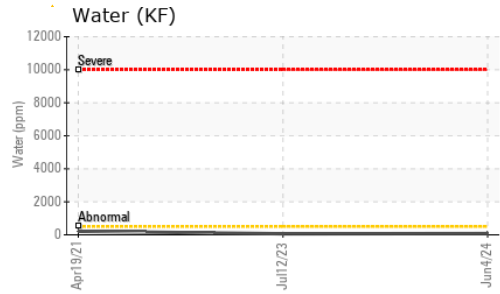
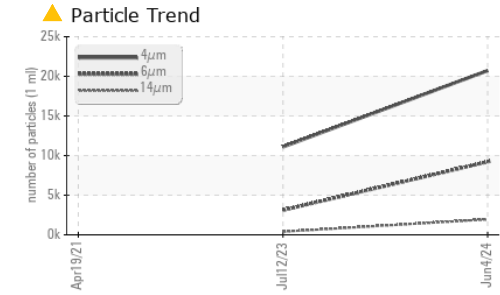
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	0	<1
Barium	ppm	ASTM D5185m	90	0	2	20
Molybdenum	ppm	ASTM D5185m	0	0	<1	0
Manganese	ppm	ASTM D5185m		0	0	<1
Magnesium	ppm	ASTM D5185m	100	<1	8	52
Calcium	ppm	ASTM D5185m	0	0	7	2
Phosphorus	ppm	ASTM D5185m	0	<1	8	18
Zinc	ppm	ASTM D5185m	0	23	35	23
Sulfur	ppm	ASTM D5185m	23500	15170	13917	17050

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	5	19	5
Sodium	ppm	ASTM D5185m		<1	0	30
Potassium	ppm	ASTM D5185m	>20	0	0	5
Water	%	ASTM D6304	>0.05	0.007	0.006	0.021
ppm Water	ppm	ASTM D6304	>500	77	63.2	214.6

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		20721	11090	---
Particles >6µm		ASTM D7647	>1300	▲ 9212	▲ 3107	---
Particles >14µm		ASTM D7647	>80	▲ 1953	▲ 395	---
Particles >21µm		ASTM D7647	>20	▲ 712	▲ 169	---
Particles >38µm		ASTM D7647	>4	▲ 27	▲ 14	---
Particles >71µm		ASTM D7647	>3	2	0	---
Oil Cleanliness		ISO 4406 (c)	>--/17/13	▲ 22/20/18	▲ 21/19/16	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.42	0.43	0.407

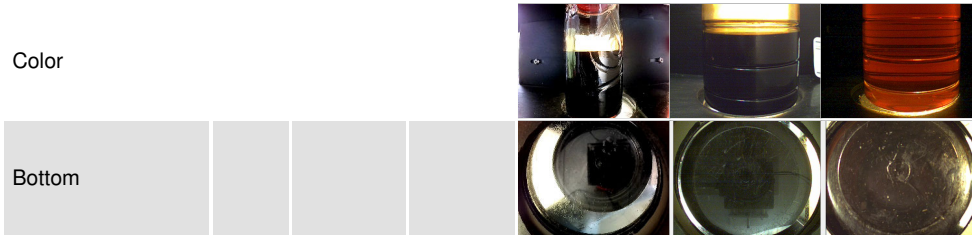
OIL ANALYSIS REPORT



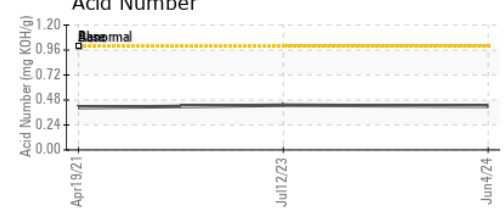
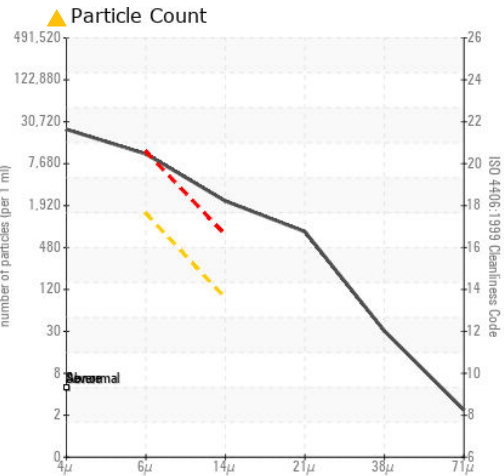
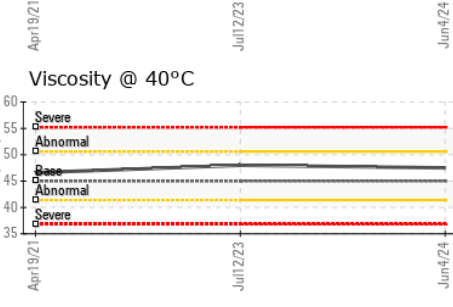
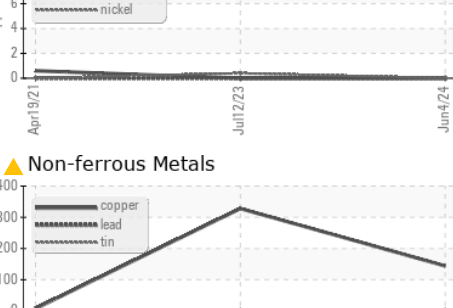
PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	47.5	48.0

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCPA017869 **Received** : 11 Jun 2024
Lab Number : 06207089 **Tested** : 13 Jun 2024
Unique Number : 11074550 **Diagnosed** : 13 Jun 2024 - Angela Borella
Test Package : IND 2 (Additional Tests: KF, PrtCount)

SUPER STATION CAR WASH
 627 CONTRA COSTA BLVD
 CONCORD, CA
 US 94523
 Contact: FRANCISCO
 francisco@super-station.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)