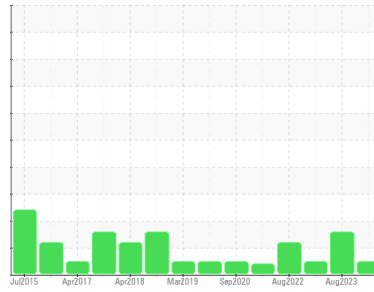




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
KAESER CSD 100 4878914 (S/N 1154)
 Component
Compressor
 Fluid
KAESER SIGMA (OEM) S-460 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

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			KCPA017151	KCPA002691	KCPA001369
Sample Date	Client Info			01 Apr 2024	07 Aug 2023	14 Mar 2023
Machine Age	hrs	Client Info		68674	64205	60726
Oil Age	hrs	Client Info		7948	0	0
Oil Changed	Client Info			Changed	N/A	N/A
Sample Status				NORMAL	ABNORMAL	NORMAL

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	0	<1
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	0	0
Copper	ppm	ASTM D5185m	>50	2	8	6
Tin	ppm	ASTM D5185m	>10	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

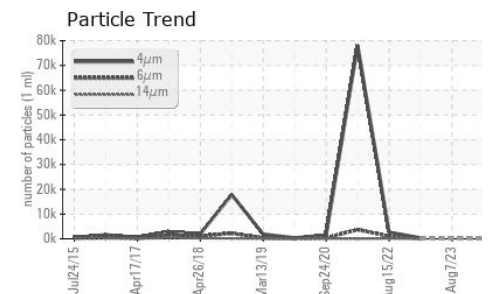
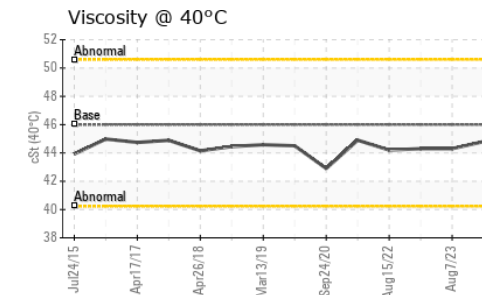
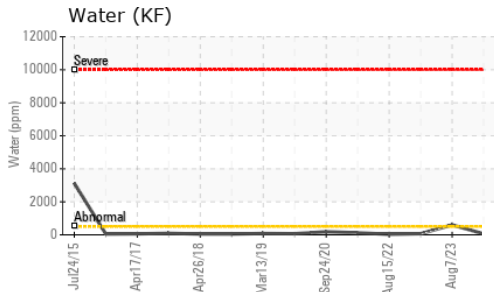
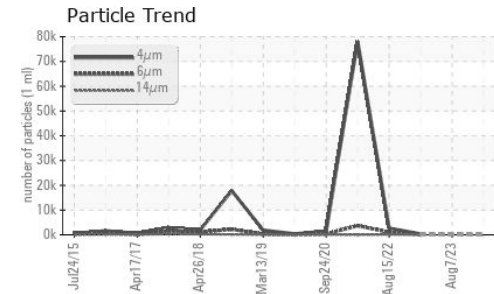
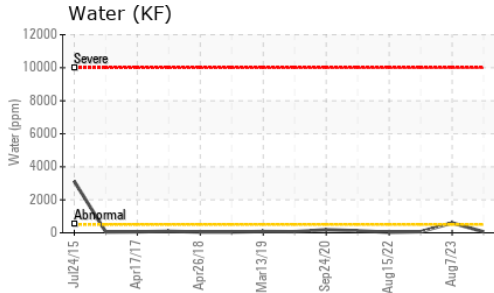
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m	90	0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		0	<1	0
Magnesium	ppm	ASTM D5185m	90	0	2	2
Calcium	ppm	ASTM D5185m	2	0	2	6
Phosphorus	ppm	ASTM D5185m		0	0	18
Zinc	ppm	ASTM D5185m		0	0	2
Sulfur	ppm	ASTM D5185m		15292	13899	11975

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	0	<1	<1
Sodium	ppm	ASTM D5185m		1	6	0
Potassium	ppm	ASTM D5185m	>20	0	<1	<1
Water	%	ASTM D6304	>0.05	0.005	▲ 0.060	0.006
ppm Water	ppm	ASTM D6304	>500	59	▲ 601.9	68.6

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		356	---	364
Particles >6µm		ASTM D7647	>1300	68	---	115
Particles >14µm		ASTM D7647	>80	6	---	17
Particles >21µm		ASTM D7647	>20	3	---	4
Particles >38µm		ASTM D7647	>4	0	---	0
Particles >71µm		ASTM D7647	>3	0	---	0
Oil Cleanliness		ISO 4406 (c)	>17/13	13/10	---	16/14/11

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.4	0.23	0.26	0.35

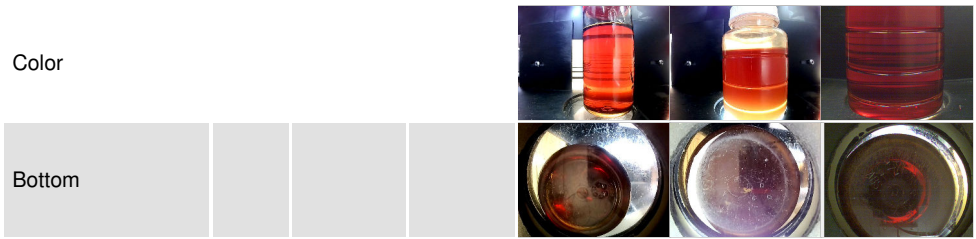
OIL ANALYSIS REPORT



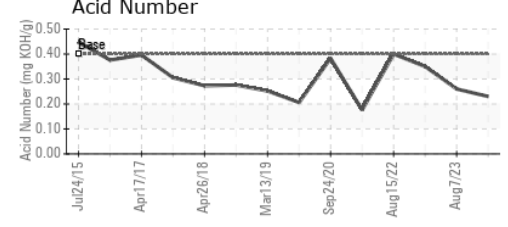
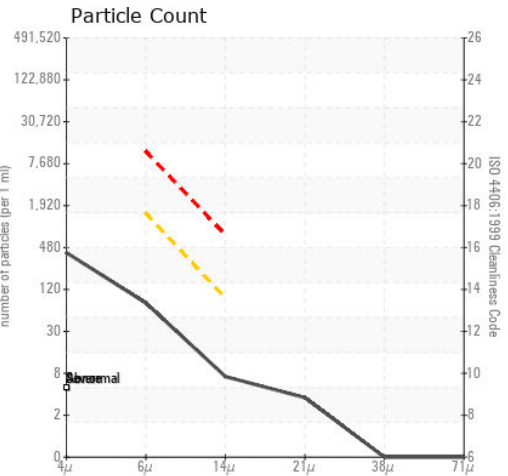
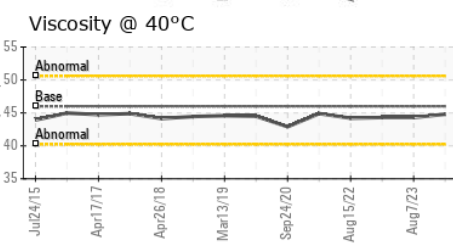
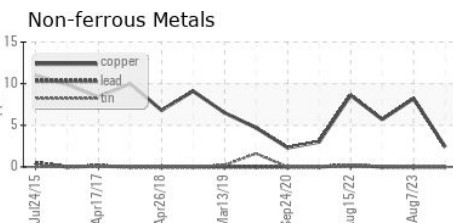
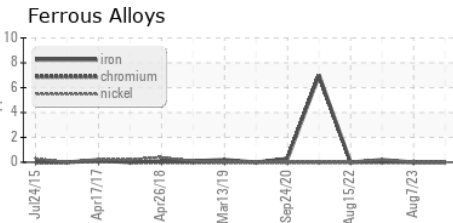
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	MODER
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	46	44.8	44.3

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCPA017151 **Received** : 26 Apr 2024
Lab Number : 06161443 **Tested** : 29 Apr 2024
Unique Number : 10996866 **Diagnosed** : 30 Apr 2024 - Don Baldrige
Test Package : IND 2 (Additional Tests: KF, PrtCount)

MAHLE ENGINE COMPONENTS
 2301 E 16TH ST
 RUSSELLVILLE, AR
 US 72802
 Contact:

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)

T:
F: