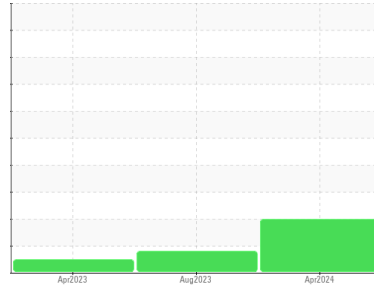




OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id

KAESER 7793018

Component

Compressor

Fluid

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

DIAGNOSIS

▲ Recommendation

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.

▲ Wear

The aluminum level has decreased, but is still abnormal. All other component wear rates are normal.

● Contamination

There is a moderate 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		KCPA016815	KCPA006752	KCP53590
Sample Date	Client Info		10 Apr 2024	16 Aug 2023	03 Apr 2023
Machine Age	hrs	Client Info	8176	5201	3056
Oil Age	hrs	Client Info	2887	0	3055
Oil Changed	Client Info		Changed	N/A	Changed
Sample Status			ABNORMAL	ABNORMAL	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>50	5	6	4
Chromium	ppm	ASTM D5185m	>10	0	0	0
Nickel	ppm	ASTM D5185m	>3	0	0	0
Titanium	ppm	ASTM D5185m	>3	<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>10	▲ 15	▲ 18	9
Lead	ppm	ASTM D5185m	>10	0	0	0
Copper	ppm	ASTM D5185m	>50	4	2	7
Tin	ppm	ASTM D5185m	>10	0	0	0
Vanadium	ppm	ASTM D5185m		<1	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		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		<1	1	2
Calcium	ppm	ASTM D5185m		0	0	0
Phosphorus	ppm	ASTM D5185m	500	432	457	260
Zinc	ppm	ASTM D5185m		151	115	89
Sulfur	ppm	ASTM D5185m		2058	2699	7935

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>25	4	<1	0
Sodium	ppm	ASTM D5185m		0	1	<1
Potassium	ppm	ASTM D5185m	>20	0	0	0
Water	%	ASTM D6304	>0.05	0.006	0.004	0.006
ppm Water	ppm	ASTM D6304	>500	65	47.2	68.0

FLUID CLEANLINESS

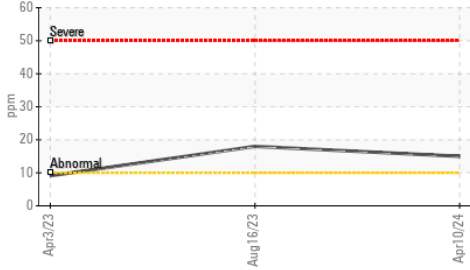
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		5354	1817	1093
Particles >6µm	ASTM D7647	>1300	● 1839	836	328
Particles >14µm	ASTM D7647	>80	● 112	18	13
Particles >21µm	ASTM D7647	>20	20	3	3
Particles >38µm	ASTM D7647	>4	1	0	0
Particles >71µm	ASTM D7647	>3	0	0	0
Oil Cleanliness	ISO 4406 (c)	>--/17/13	● 20/18/14	18/17/11	17/16/11

FLUID DEGRADATION

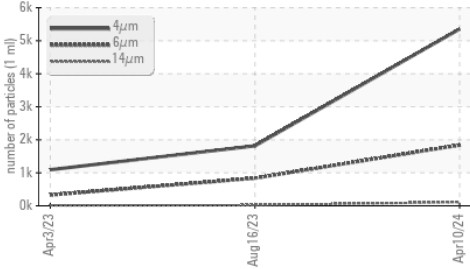
	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	1.5	1.53	1.33	0.73

OIL ANALYSIS REPORT

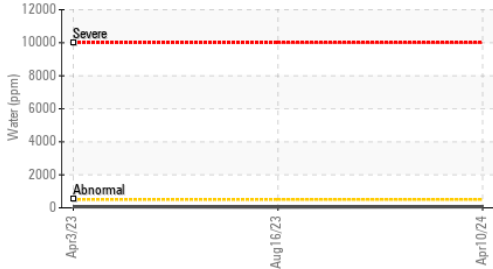
▲ Aluminum (ppm)



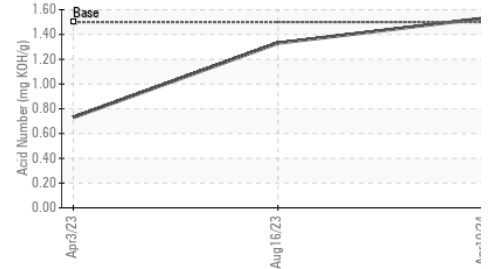
● Particle Trend



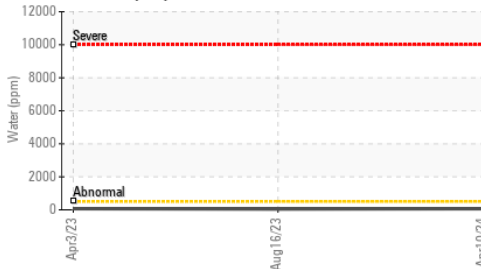
▲ Water (KF)



Acid Number



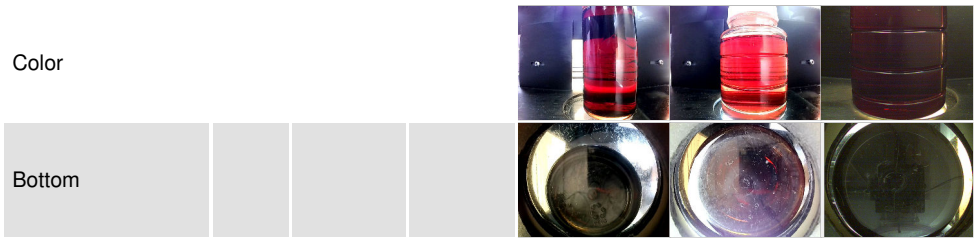
Water (KF)



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

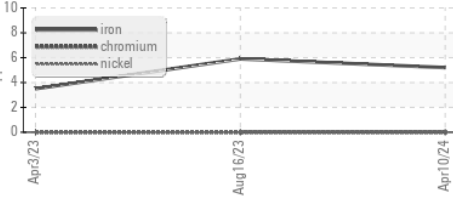
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 46	52.1	46.8	45.7

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

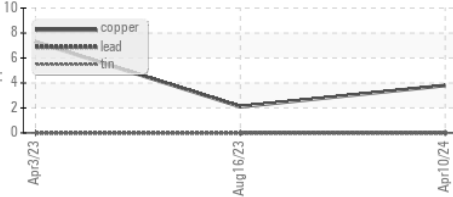


GRAPHS

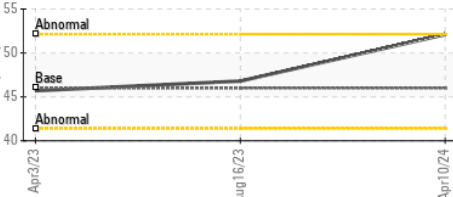
Ferrous Alloys



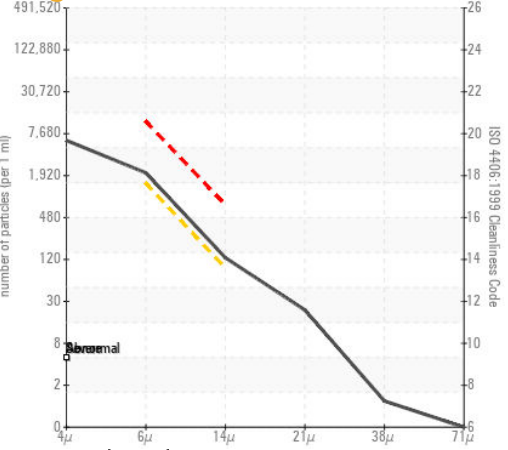
Non-ferrous Metals



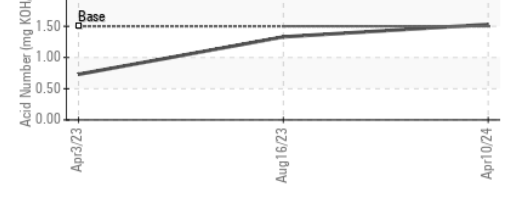
Viscosity @ 40°C



● Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCPA016815 **Received** : 22 Apr 2024
Lab Number : 06155949 **Tested** : 23 Apr 2024
Unique Number : 10991372 **Diagnosed** : 24 Apr 2024 - Don Baldrige
Test Package : IND 2 (Additional Tests: KF, PrtCount)

KROGER CENTRAL FILL
 301 LOGISTICS AVE
 JEFFERSONVILLE, IN
 US 47130
 Contact: REBECCA WILLIAMSON
 rebecca.williamson@kroger.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)