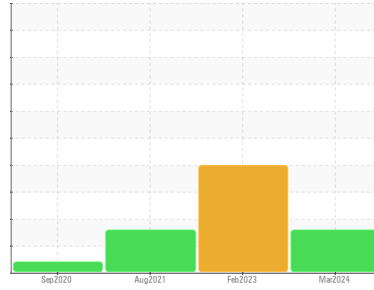




OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id
KAESER AS 20 5036187 (S/N 1016)

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 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	KCPA014877	KCP55150	KCP11909
Sample Date	Client Info	05 Mar 2024	07 Feb 2023	31 Aug 2021
Machine Age	hrs	37732	34514	29738
Oil Age	hrs	2218	8903	7617
Oil Changed	Client Info	Not Chngd	Changed	Changed
Sample Status		ATTENTION	ABNORMAL	ABNORMAL

WEAR METALS

method	limit/base	current	history1	history2
Iron ppm	ASTM D5185m >50	4	6	0
Chromium ppm	ASTM D5185m >10	<1	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	0
Aluminum ppm	ASTM D5185m >10	<1	2	0
Lead ppm	ASTM D5185m >10	0	0	0
Copper ppm	ASTM D5185m >50	5	8	6
Tin ppm	ASTM D5185m >10	0	0	<1
Antimony ppm	ASTM D5185m	---	---	11
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	13
Barium ppm	ASTM D5185m 90	0	0	0
Molybdenum ppm	ASTM D5185m 0	3	0	0
Manganese ppm	ASTM D5185m	<1	<1	0
Magnesium ppm	ASTM D5185m 100	32	2	<1
Calcium ppm	ASTM D5185m 0	<1	<1	0
Phosphorus ppm	ASTM D5185m 0	<1	3	<1
Zinc ppm	ASTM D5185m 0	103	14	0
Sulfur ppm	ASTM D5185m 23500	21399	21600	16128

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon ppm	ASTM D5185m >25	2	1	<1
Sodium ppm	ASTM D5185m	17	<1	1
Potassium ppm	ASTM D5185m >20	0	0	0
Water %	ASTM D6304 >0.05	0.013	▲ 0.176	0.007
ppm Water	ASTM D6304 >500	131	▲ 1760	78.9

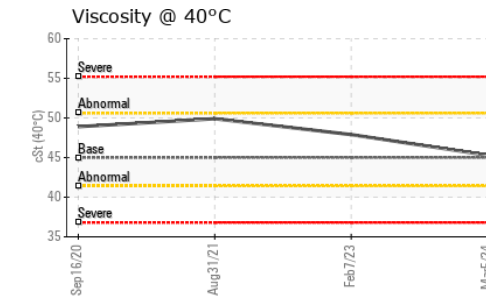
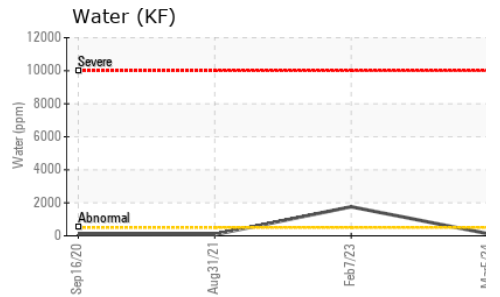
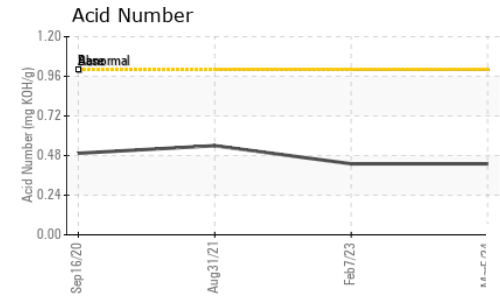
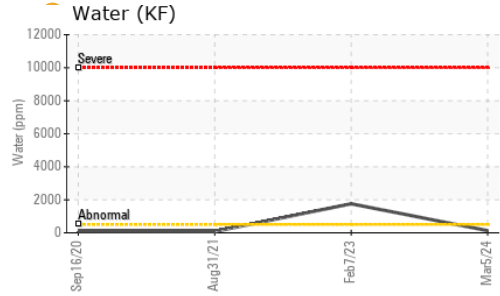
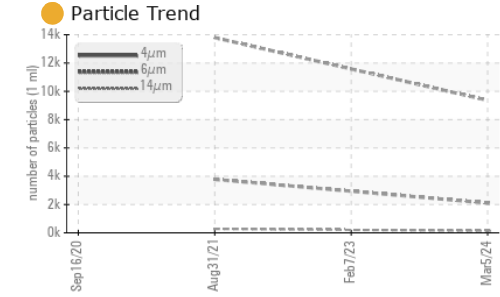
FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	9364	---	13795
Particles >6µm	ASTM D7647 >1300	● 2106	---	▲ 3773
Particles >14µm	ASTM D7647 >80	● 137	---	▲ 273
Particles >21µm	ASTM D7647 >20	● 41	---	▲ 69
Particles >38µm	ASTM D7647 >4	3	---	4
Particles >71µm	ASTM D7647 >3	0	---	0
Oil Cleanliness	ISO 4406 (c) >--/17/13	● 20/18/14	---	▲ 19/15

FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g	ASTM D8045 1.0	0.43	0.43	0.540

OIL ANALYSIS REPORT

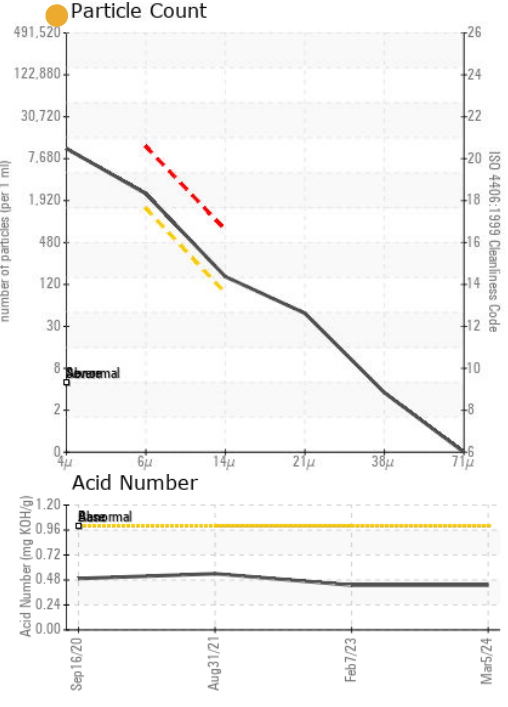
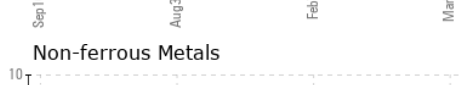
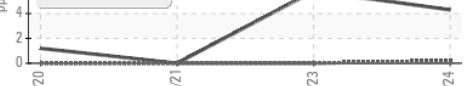


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	▲ MODER	NONE
Debris	scalar	*Visual	NONE	NONE	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	0.2%
Free Water	scalar	*Visual		NEG	▲ 1.0

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 45	45.3	47.9	49.9

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCPA014877 **Received** : 19 Mar 2024
Lab Number : 06123210 **Tested** : 20 Mar 2024
Unique Number : 10937361 **Diagnosed** : 21 Mar 2024 - Don Baldrige
Test Package : IND 2 (Additional Tests: KF, PrtCount)

DHL - OCEAN X LLC
 6390 COMMERCE CT
 GROVEPORT, OH
 US 43125
 Contact: Service Manager

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)