PROBLEM SUMMARY

Sample Rating Trend
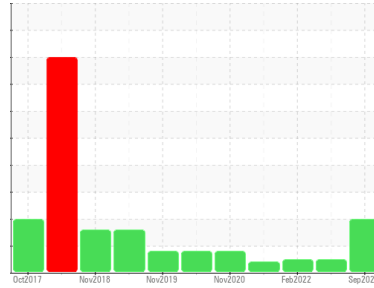
Oct2017 Nov2018 Nov2019 Nov2020 Feb2022 Sep2023

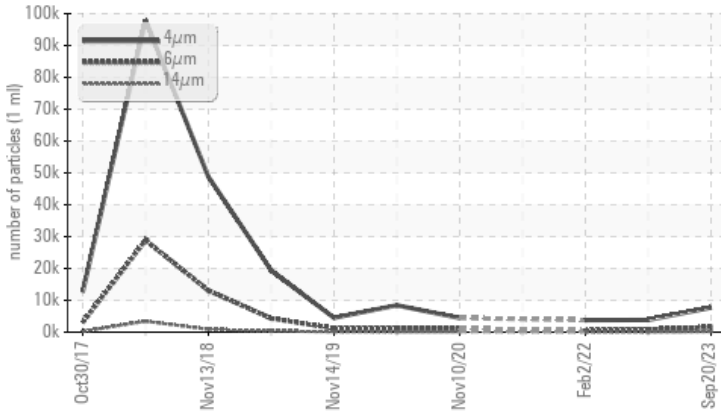**ISO**

Machine Id
KAESER SK 15 4007509 (S/N 1027)
Component
Compressor
Fluid
KAESER SIGMA (OEM) S-460 (--- QTS)

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**	NORMAL	NORMAL
Particles >6µm		ASTM D7647	>1300	⚠ **1589**	826	459
Particles >14µm		ASTM D7647	>80	⚠ **164**	36	19
Particles >21µm		ASTM D7647	>20	⚠ **63**	11	9
Particles >38µm		ASTM D7647	>4	⚠ **5**	1	0
Oil Cleanliness		ISO 4406 (c)	>--/17/13	⚠ **20/18/15**	19/17/12	16/11

Customer Id: IUPIND
Sample No.: KC05964628
Lab Number: 05964628
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Don Baldridge +1
don.b505@comcast.net

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

17 Feb 2023 Diag: Don Baldridge

NORMAL

view report

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

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02 Feb 2022 Diag: Don Baldridge

NORMAL

view report

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

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24 May 2021 Diag: Jonathan Hester

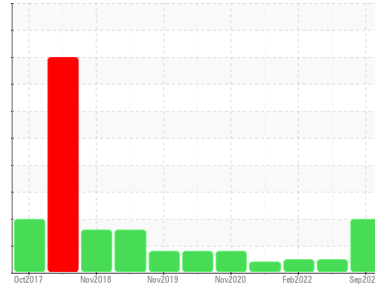**VIS DEBRIS**

view report

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.All component wear rates are normal. Moderate concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

OIL ANALYSIS REPORT

KAESER COMPRESSORS — Built for a lifetime.™

Sample Rating Trend

ISO

Machine Id
KAESER SK 15 4007509 (S/N 1027)
Component
Compressor
Fluid
KAESER SIGMA (OEM) S-460 (--- QTS)

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		**KC05964628**	KCP105671	KC85807
Sample Date		Client Info		**20 Sep 2023**	17 Feb 2023	02 Feb 2022
Machine Age	hrs	Client Info		**64539**	60049	52869
Oil Age	hrs	Client Info		**0**	6000	4000
Oil Changed		Client Info		**N/A**	Changed	Not Changd
Sample Status				**ABNORMAL**	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	**0**	<1	0
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**	<1	<1
Aluminum	ppm	ASTM D5185m	>10	**0**	<1	0
Lead	ppm	ASTM D5185m	>10	**0**	0	0
Copper	ppm	ASTM D5185m	>50	**7**	5	6
Tin	ppm	ASTM D5185m	>10	**0**	0	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	3
Barium	ppm	ASTM D5185m	90	**<1**	2	0
Molybdenum	ppm	ASTM D5185m		**0**	0	0
Manganese	ppm	ASTM D5185m		**0**	0	0
Magnesium	ppm	ASTM D5185m	90	**3**	1	0
Calcium	ppm	ASTM D5185m	2	**2**	0	0
Phosphorus	ppm	ASTM D5185m		**2**	12	2
Zinc	ppm	ASTM D5185m		**5**	<1	0

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**0**	0	0
Sodium	ppm	ASTM D5185m		**<1**	0	<1
Potassium	ppm	ASTM D5185m	>20	**0**	<1	0
Water	%	ASTM D6304	>0.05	**0.006**	0.010	0.005
ppm Water	ppm	ASTM D6304	>500	**69.2**	104.2	52.6

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		**7728**	3825	3775
Particles >6µm		ASTM D7647	>1300	▲ **1589**	826	459
Particles >14µm		ASTM D7647	>80	▲ **164**	36	19
Particles >21µm		ASTM D7647	>20	▲ **63**	11	9
Particles >38µm		ASTM D7647	>4	▲ **5**	1	0
Particles >71µm		ASTM D7647	>3	**1**	0	0
Oil Cleanliness		ISO 4406 (c)	>--/17/13	▲ **20/18/15**	19/17/12	16/11

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.4	**0.44**	0.44	0.45

OIL ANALYSIS REPORT

KAESER COMPRESSORS — Built for a lifetime.™

Particle Trend

(graph: number of particles (1 ml), legend: 4µm, 6µm, 14µm; x-axis Oct30/17 → Sep20/23)

Water (KF)

(Water (ppm); Severe ~10000, Abnormal line; x-axis Oct30/17 → Sep20/23)

Acid Number

(Acid Number (mg KOH/g); Base line ~0.40)

Water (KF)

(Water (ppm); Severe ~10000, Abnormal)

Viscosity @ 40°C

(cSt (40°C); Abnormal ~51, Base ~46, Abnormal ~40)
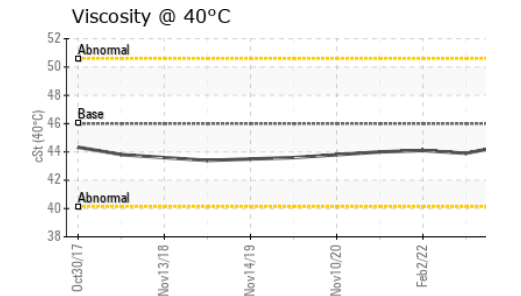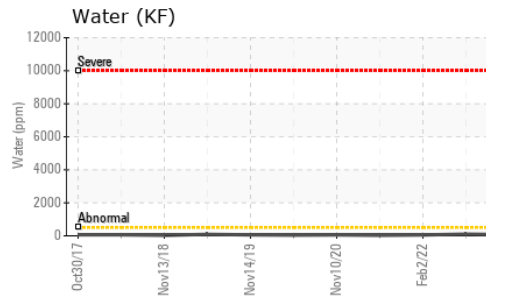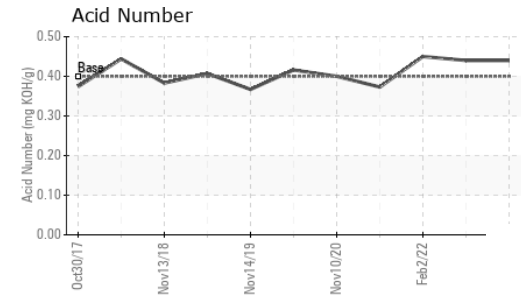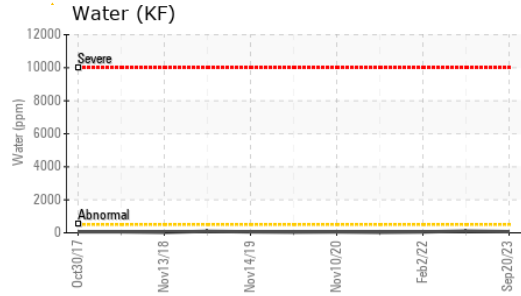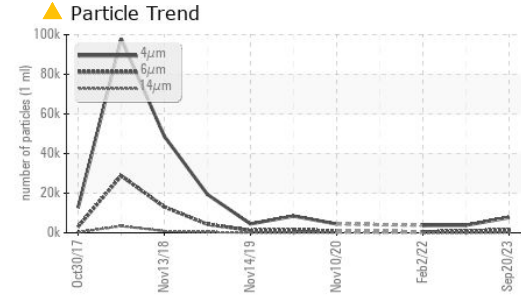
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**LIGHT**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46	**44.5**	43.9	44.1

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

Ferrous Alloys

(ppm; legend: iron, chromium, nickel; x-axis Oct30/17 → Sep20/23)

Non-ferrous Metals

(ppm; legend: copper, lead, tin)

Viscosity @ 40°C

(cSt (40°C); Abnormal ~50, Base ~45, Abnormal ~40)

Particle Count

(number of particles (per 1 ml) vs ISO 4406:1999 Cleanliness Code; x-axis 4µ, 6µ, 14µ, 21µ, 38µ, 71µ)

Acid Number

(Acid Number (mg KOH/g); Base ~0.40)
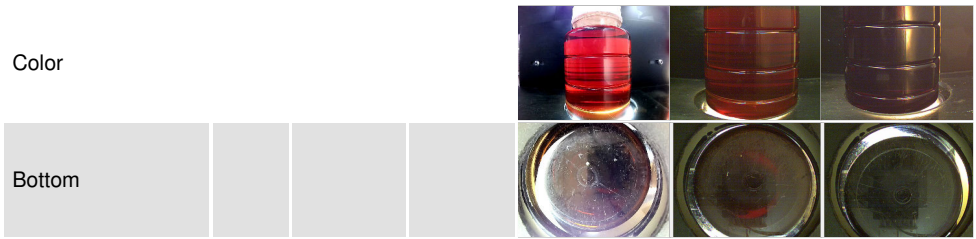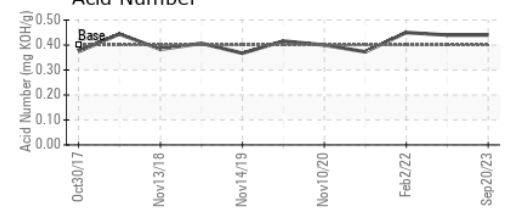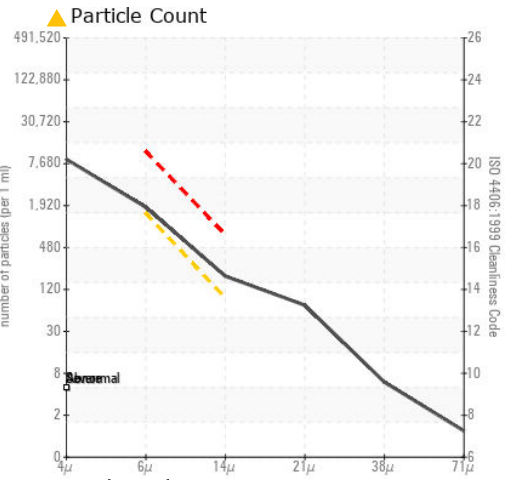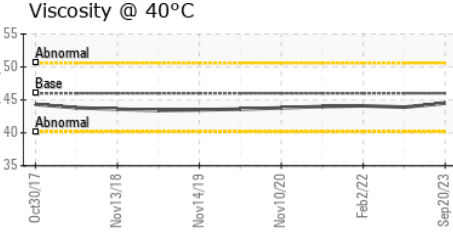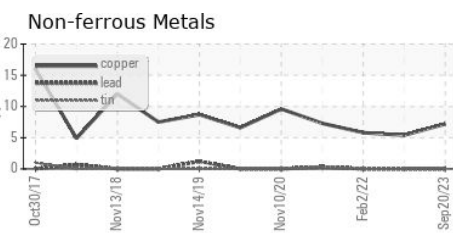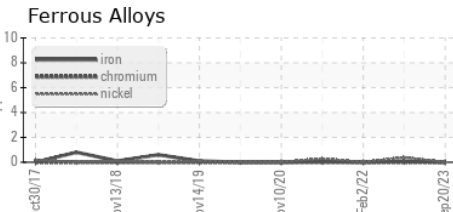
				IUP - SW JACK PLANT
Laboratory	: WearCheck USA - 501 Madison Ave., Cary, NC 27513			525 PRATT DR
Sample No.	: KC05964628	**Received**	: 29 Sep 2023	INDIANA, PA
Lab Number	: 05964628	**Diagnosed**	: 02 Oct 2023	US 15705
Unique Number	: 10671179	**Diagnostician**	: Don Baldridge	Contact: Service Manager
Test Package	: IND 2			

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.   T:

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)   F:

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