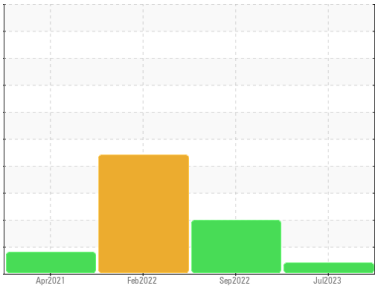
PROBLEM SUMMARY

Sample Rating Trend



VIS DEBRIS

Machine Id
7228740 (S/N 1109)
Component
Compressor
Fluid
KAESER SIGMA (OEM) S-460 (--- GAL)

COMPONENT CONDITION SUMMARY

No relevant graphs to display

RECOMMENDATION

The 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.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL
Debris	scalar	*Visual	NONE	▲ **MODER**	LIGHT	▲ MODER

Customer Id: SMAFOR
Sample No.: KC05922190
Lab Number: 05922190
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Alert	---	---	?	We were unable to perform a particle count due to a high concentration of particles present in this sample.

HISTORICAL DIAGNOSIS

09 Sep 2022 Diag: Doug Bogart

ISO

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.All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

14 Feb 2022 Diag: Jonathan Hester

WATER

We advise that you stop the unit and follow the water drain-off procedure for this component. The filter change at the time of sampling has been noted. We recommend an early resample in 500 hours to monitor this condition. 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. Appearance is hazy. Free water present. There is a light concentration of water present in the oil. 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.

view report

15 Apr 2021 Diag: Doug Bogart

ISO

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.All component wear rates are normal. There is a moderate amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

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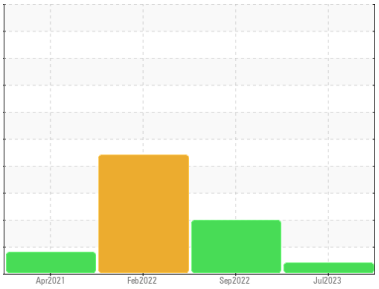
OIL ANALYSIS REPORT

Sample Rating Trend



VIS DEBRIS

Machine Id
7228740 (S/N 1109)
Component
Compressor
Fluid
KAESER SIGMA (OEM) S-460 (--- GAL)

DIAGNOSIS

Recommendation
The 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.

Wear
All component wear rates are normal.

Contamination
Moderate concentration of visible dirt/debris 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		**KC05922190**	KCP49391	KCP48695
Sample Date		Client Info		**28 Jul 2023**	09 Sep 2022	14 Feb 2022
Machine Age	hrs	Client Info		**15960**	12424	8830
Oil Age	hrs	Client Info		**0**	3000	4417
Oil Changed		Client Info		**N/A**	Changed	Not Changd
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	**<1**	<1	0
Chromium	ppm	ASTM D5185m	>10	**0**	0	0
Nickel	ppm	ASTM D5185m	>3	**0**	<1	1
Titanium	ppm	ASTM D5185m	>3	**0**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	0	<1
Aluminum	ppm	ASTM D5185m	>10	**1**	<1	<1
Lead	ppm	ASTM D5185m	>10	**0**	0	<1
Copper	ppm	ASTM D5185m	>50	**27**	30	14
Tin	ppm	ASTM D5185m	>10	**0**	0	0
Antimony	ppm	ASTM D5185m		**---**	---	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	90	**0**	0	0
Molybdenum	ppm	ASTM D5185m		**0**	0	0
Manganese	ppm	ASTM D5185m		**<1**	0	<1
Magnesium	ppm	ASTM D5185m	90	**0**	0	7
Calcium	ppm	ASTM D5185m	2	**0**	0	0
Phosphorus	ppm	ASTM D5185m		**<1**	11	10
Zinc	ppm	ASTM D5185m		**0**	2	55

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**<1**	2	2
Sodium	ppm	ASTM D5185m		**<1**	<1	32
Potassium	ppm	ASTM D5185m	>20	**0**	<1	9
Water	%	ASTM D6304	>0.05	**0.001**	0.015	▲ 0.119
ppm Water	ppm	ASTM D6304	>500	**14.0**	158.9	▲ 1190

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		**---**	35209	---
Particles >6µm		ASTM D7647	>1300	**---**	▲ 6715	---
Particles >14µm		ASTM D7647	>80	**---**	▲ 693	---
Particles >21µm		ASTM D7647	>20	**---**	▲ 148	---
Particles >38µm		ASTM D7647	>4	**---**	▲ 7	---
Particles >71µm		ASTM D7647	>3	**---**	0	---
Oil Cleanliness		ISO 4406 (c)	>--/17/13	**---**	▲ 22/20/17	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.4	**0.28**	0.21	0.13

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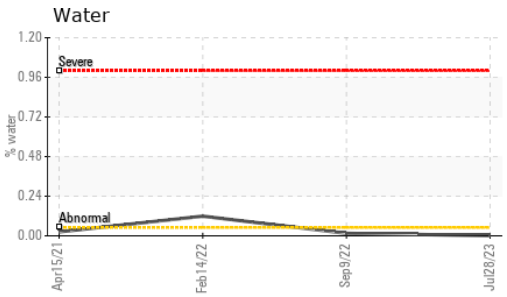
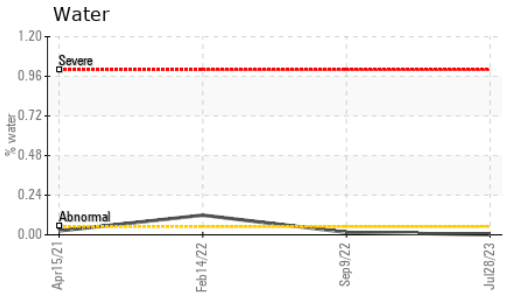
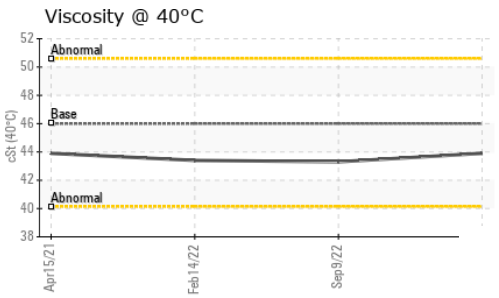
OIL ANALYSIS REPORT

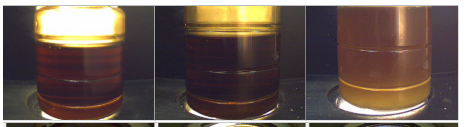
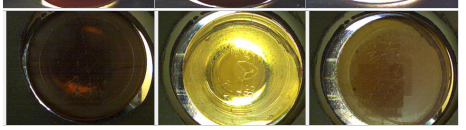




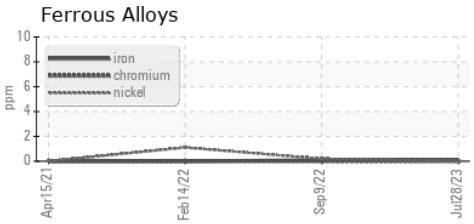


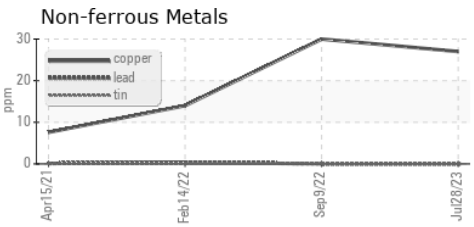
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	▲ **MODER**	LIGHT	▲ MODER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

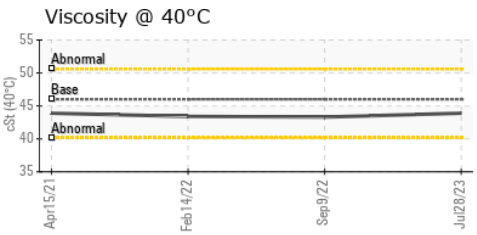
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46	**43.9**	43.3	43.4

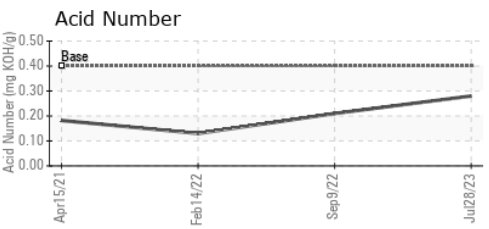
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS









Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KC05922190
Lab Number : 05922190
Unique Number : 10602137
Test Package : IND 2

Received : 11 Aug 2023
Diagnosed : 14 Aug 2023
Diagnostician : Jonathan Hester

SMART LASER MANUFACTURING
11821 N PROFIT RD
FORNEY, TX
US 75126
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)

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F: