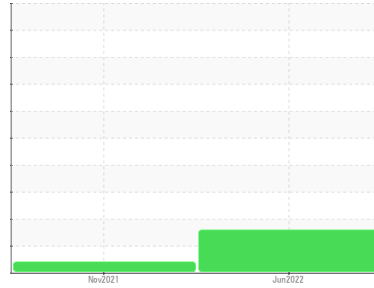




PROBLEM SUMMARY

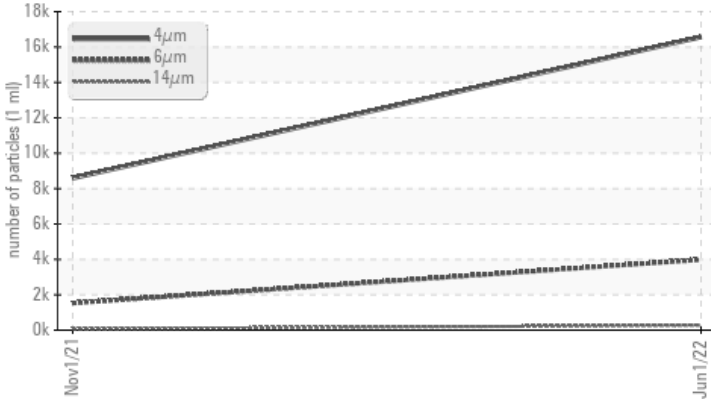
Sample Rating Trend



Machine Id
KAESER SM 15 3937894 (S/N 1150)
 Component
Compressor
 Fluid
KAESER SIGMA (OEM) M-460 (--- GAL)

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	ATTENTION	---
Particles >6µm	ASTM D7647	>1300	▲ 3983	▲ 1529	---
Particles >14µm	ASTM D7647	>80	▲ 271	72	---
Particles >21µm	ASTM D7647	>20	▲ 69	19	---
Oil Cleanliness	ISO 4406 (c)	>--/17/13	▲ 21/19/15	▲ 18/13	---

Customer Id: ASPATL
 Sample No.: KCP40438
 Lab Number: 05584151
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Don Baldrige +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

01 Nov 2021 Diag: Don Baldrige

ISO



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 silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

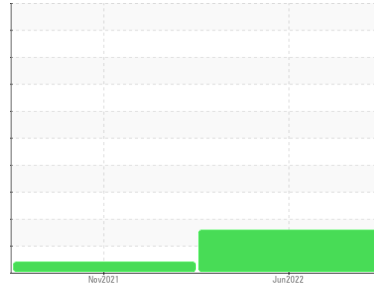
view report





OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
KAESER SM 15 3937894 (S/N 1150)

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 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			KCP40438	KCP38797	---
Sample Date	Client Info			01 Jun 2022	01 Nov 2021	---
Machine Age	hrs	Client Info		32154	31267	---
Oil Age	hrs	Client Info		887	1151	---
Oil Changed	Client Info			Not Chngd	Changed	---
Sample Status				ABNORMAL	ATTENTION	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	<1	<1	---
Chromium	ppm	ASTM D5185m	>10	0	0	---
Nickel	ppm	ASTM D5185m	>3	0	0	---
Titanium	ppm	ASTM D5185m	>3	0	0	---
Silver	ppm	ASTM D5185m	>2	0	<1	---
Aluminum	ppm	ASTM D5185m	>10	<1	<1	---
Lead	ppm	ASTM D5185m	>10	<1	0	---
Copper	ppm	ASTM D5185m	>50	2	14	---
Tin	ppm	ASTM D5185m	>10	0	<1	---
Antimony	ppm	ASTM D5185m		---	0	---
Vanadium	ppm	ASTM D5185m		0	0	---
Cadmium	ppm	ASTM D5185m		0	0	---

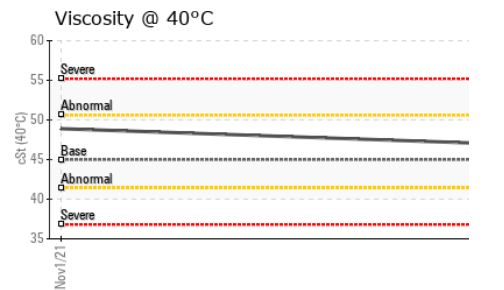
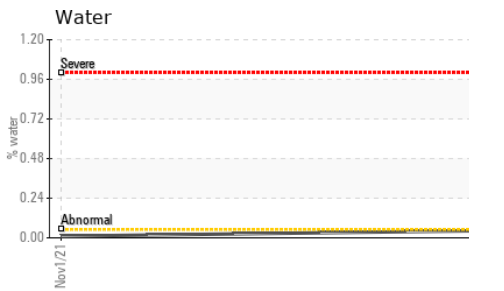
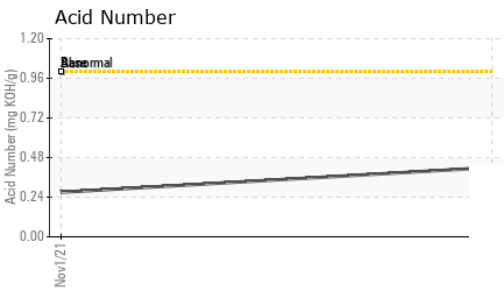
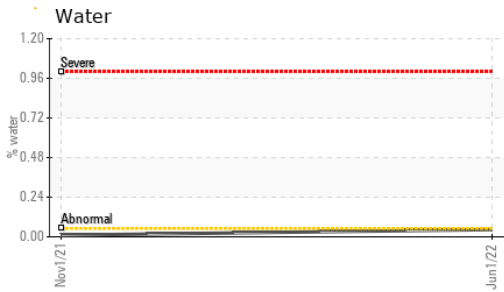
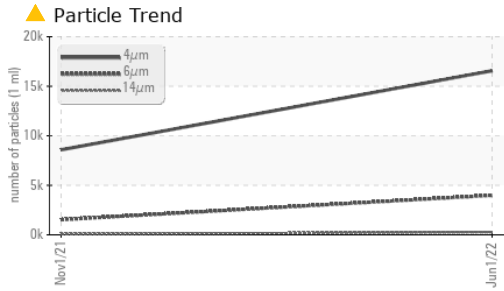
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	25	---
Barium	ppm	ASTM D5185m	90	62	0	---
Molybdenum	ppm	ASTM D5185m	0	0	0	---
Manganese	ppm	ASTM D5185m		0	<1	---
Magnesium	ppm	ASTM D5185m	100	91	42	---
Calcium	ppm	ASTM D5185m	0	2	1	---
Phosphorus	ppm	ASTM D5185m	0	0	2	---
Zinc	ppm	ASTM D5185m	0	3	41	---
Sulfur	ppm	ASTM D5185m	23500	21761	18895	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	0	<1	---
Sodium	ppm	ASTM D5185m		4	25	---
Potassium	ppm	ASTM D5185m	>20	1	4	---
Water	%	ASTM D6304	>0.05	0.044	0.010	---
ppm Water	ppm	ASTM D6304	>500	445.2	106.1	---

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		16564	8583	---
Particles >6µm		ASTM D7647	>1300	▲ 3983	▲ 1529	---
Particles >14µm		ASTM D7647	>80	▲ 271	72	---
Particles >21µm		ASTM D7647	>20	▲ 69	19	---
Particles >38µm		ASTM D7647	>4	3	1	---
Particles >71µm		ASTM D7647	>3	0	0	---
Oil Cleanliness		ISO 4406 (c)	>--/17/13	▲ 21/19/15	▲ 18/13	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.42	0.270	---

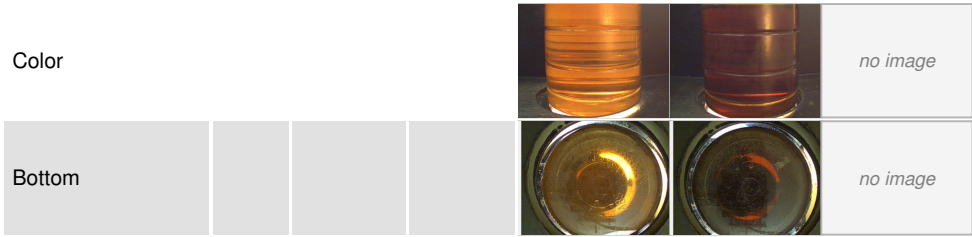
OIL ANALYSIS REPORT



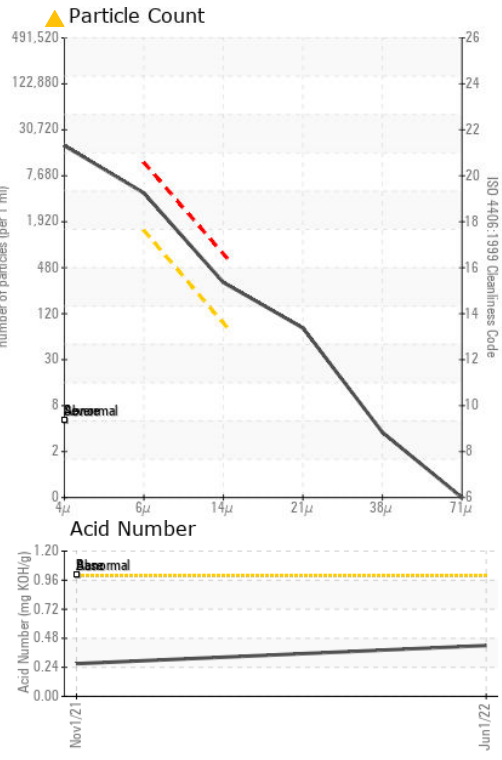
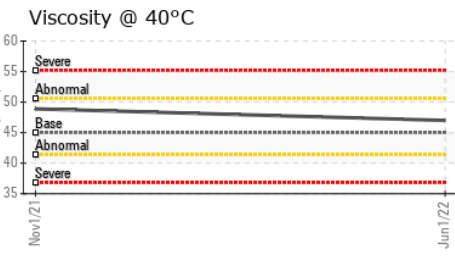
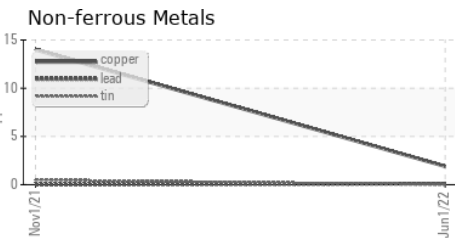
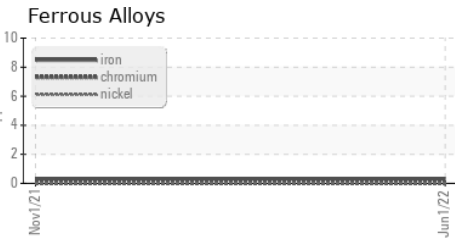
PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 45	47.0	48.9	---

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



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCP40438 **Received** : 05 Jul 2022
Lab Number : 05584151 **Diagnosed** : 07 Jul 2022
Unique Number : 10038577 **Diagnostician** : Don Baldrige
Test Package : IND 2 (Additional Tests: KF, PrtCount)

ASPEN REFRIGERATION
 5211 IND CT SC
 ATLANTA, GA
 US 30339
 Contact: BRIAN LORD
 BRIANLORD@ASPENREFRIGERANTS.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)

T:
F: