

PROBLEM SUMMARY

Sample Rating Trend

VISCOSITY

VISCOSITI

Machine Id

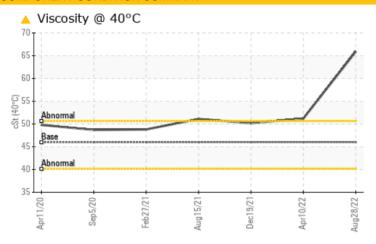
KAESER DSD 150 6221035 (S/N 1017)

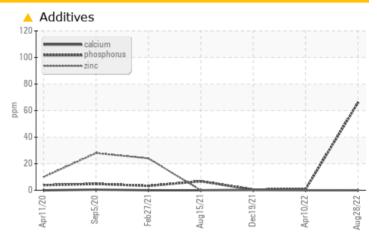
Component

Compressor

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

COMPONENT CONDITION SUMMARY





RECOMMENDATION

The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS									
Sample Status				ATTENTION	NORMAL	ABNORMAL			
Phosphorus	ppm	ASTM D5185m		△ 66	<1	<1			
Sulfur	ppm	ASTM D5185m		4355	15332	18479			
Visc @ 40°C	cSt	ASTM D445	46	65.9	51.2	50.2			

Customer Id: CUSGRAKC Sample No.: KCP30969 Lab Number: 05639667 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data: Doug Bogart +1 (800)237-1369 x4016 dougb@wearcheckusa.com

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

10 Apr 2022 Diag: Doug Bogart

NORMAL



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.



19 Dec 2021 Diag: Jonathan Hester

150



The 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.



15 Aug 2021 Diag: Don Baldridge

NORMAL



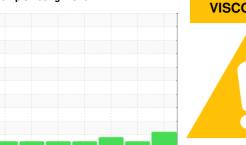
Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for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





OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY

KAESER DSD 150 6221035 (S/N 1017)

Compressor

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.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

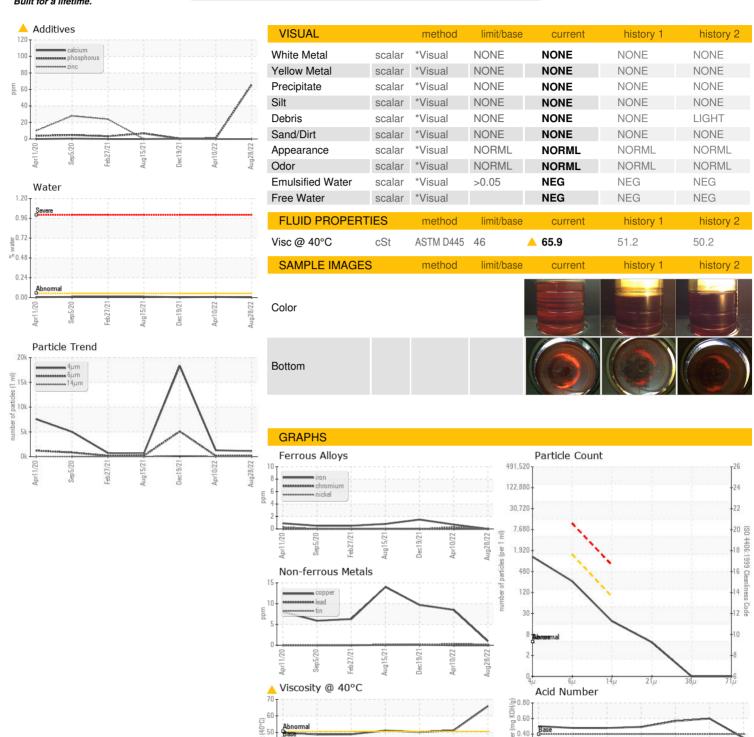
Fluid Condition

The oil viscosity is higher than normal. This plus the additive levels indicates the addition of a different brand, or type of oil. Confirm oil type. The AN level is acceptable for this fluid.

Sample Number KCP30969 KCP44358 KCP3964 Sample Date 28 Aug 2022 10 Apr 2022 19 Dec 203 Machine Age hrs 28602 26000 23984 Oil Age hrs 2594 4421 2397 Oil Changed Not Changd Not Changed Not Changed ABNORMA Sample Status method limit/base current history history Iron ppm ASTM D5185m >50 0 <1 2 Chromium ppm ASTM D5185m >50 0 <1 2 Chromium ppm ASTM D5185m >10 0 0 0 Nickel ppm ASTM D5185m >3 0 <1 0 Silver ppm ASTM D5185m >2 <1 0 <1 Aluminum ppm ASTM D5185m >10 3 <1 2 Lead ppm ASTM D5185m >10 0 0	CAMPLE INCOR	AATION	and a district	Discoult floor		la la tama d	la la La marco
Sample Date 28 Aug 2022 10 Apr 2022 19 Dec 202 Machine Age hrs 28602 26000 23984 Oil Age hrs 2594 4421 2397 Oil Changed Not Change 1 1 1 1 1		TATION	method	limit/base		history 1	history 2
Machine Age hrs 28602 26000 23984 Oil Age hrs 2594 4421 2397 Oil Changed Not Changed Not Changed Not Changed Not Changed Sample Status MTENTION NORMAL ABNORMA WEAR METALS method limit/base current history 1 history Iron ppm ASTM D5185m >50 0 <1	·						KCP39664
Oil Age hrs 2594 4421 2397 Oil Changed Not Ch	•				28 Aug 2022	10 Apr 2022	19 Dec 2021
Oil Changed Sample Status Not Changed ATTENTION Not Changed ATTENTION Not Changed ABNORMAL ABNORMAL<		hrs			28602		23984
Sample Status		hrs			2594	4421	2397
WEAR METALS	Oil Changed						Not Changd
Iron	Sample Status				ATTENTION	NORMAL	ABNORMAL
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 <1 0 <1 Aluminum ppm ASTM D5185m >10 3 <1 2 Lead ppm ASTM D5185m >10 0 0 <1 Copper ppm ASTM D5185m >10 0 0 <1 Tin ppm ASTM D5185m >10 <1 <1 <1 Antimony ppm ASTM D5185m >10 <1 <1 <1 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 0 0 0 <td< th=""><th>WEAR METALS</th><th></th><th>method</th><th>limit/base</th><th>current</th><th>history 1</th><th>history 2</th></td<>	WEAR METALS		method	limit/base	current	history 1	history 2
Nickel ppm ASTM D5185m >3 0 <1 0 Titanium ppm ASTM D5185m >3 0 0 0 Silver ppm ASTM D5185m >2 <1	Iron	ppm	ASTM D5185m	>50	0	<1	2
Titanium ppm ASTM D5185m >3 0 0 0 Silver ppm ASTM D5185m >2 <1	Chromium	ppm	ASTM D5185m	>10	0	0	0
Silver ppm ASTM D5185m >2 <1 0 <1 Aluminum ppm ASTM D5185m >10 3 <1	Nickel	ppm	ASTM D5185m	>3	0	<1	0
Aluminum ppm ASTM D5185m >10 3 <1 2 Lead ppm ASTM D5185m >10 0 0 <1	Titanium	ppm	ASTM D5185m	>3	0	0	0
Lead ppm ASTM D5185m >10 0 0 <1 Copper ppm ASTM D5185m >50 1 8 10 Tin ppm ASTM D5185m >10 <1 <1 <1 Antimony ppm ASTM D5185m 0 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history 1 history Barium ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 90 0 0 0 0 Male Ma	Silver	ppm	ASTM D5185m	>2	<1	0	<1
Lead ppm ASTM D5185m >10 0 0 <1 Copper ppm ASTM D5185m >50 1 8 10 Tin ppm ASTM D5185m >10 <1 <1 <1 Antimony ppm ASTM D5185m 0 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history 1 history Barium ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 90 0 0 0 0 Male ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 0 0 0 <1 Calcium ppm ASTM D5185m 0 0 0	Aluminum	ppm	ASTM D5185m	>10	3	<1	2
Copper ppm ASTM D5185m >50 1 8 10 Tin ppm ASTM D5185m >10 <1	Lead			>10	0	0	<1
Tin ppm ASTM D5185m >10 <1 <1 <1 Antimony ppm ASTM D5185m <1 Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history 1 history Boron ppm ASTM D5185m 0 0 <1 astmation Barium ppm ASTM D5185m 90 0 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Manganese ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 2 0 0 <1 Phosphorus ppm ASTM D5185m △ 66 <1 <1 Zinc ppm ASTM D5185m △ 4355 15332 18479	Copper		ASTM D5185m	>50	1	8	10
Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history 1 Boron ppm ASTM D5185m 0 0 <1 Barium ppm ASTM D5185m 90 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Manganese ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 2 0 0 <1 Calcium ppm ASTM D5185m △ 66 <1 <1 Phosphorus ppm ASTM D5185m △ 66 <1 <1 Zinc ppm ASTM D5185m △ 4355 15332 18479 CONTAMINANTS method limit/base current history history Silicon <td>Tin</td> <td>ppm</td> <td>ASTM D5185m</td> <td>>10</td> <th><1</th> <td><1</td> <td><1</td>	Tin	ppm	ASTM D5185m	>10	<1	<1	<1
Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history 1 history Boron ppm ASTM D5185m 0 0 <1	Antimony		ASTM D5185m				<1
ADDITIVES method limit/base current history 1 history Boron ppm ASTM D5185m 0 0 <1		ppm	ASTM D5185m		0	0	0
Boron ppm ASTM D5185m 0 0 <1 Barium ppm ASTM D5185m 90 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Manganese ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 90 <1 <1 1 Calcium ppm ASTM D5185m 2 0 0 <1 <1 Phosphorus ppm ASTM D5185m △ 66 <1 <1 <1 Zinc ppm ASTM D5185m △ 4355 15332 18479 CONTAMINANTS method limit/base current history history Silicon ppm ASTM D5185m >25 <1 1 1	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 90 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Manganese ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 90 <1	ADDITIVES		method	limit/base	current	history 1	history 2
Molybdenum ppm ASTM D5185m 0 0 0 Manganese ppm ASTM D5185m 0 0 0 Magnesium ppm ASTM D5185m 90 <1 <1 1 Calcium ppm ASTM D5185m 2 0 0 <1 Phosphorus ppm ASTM D5185m △ 66 <1 <1 Zinc ppm ASTM D5185m 0 0 0 Sulfur ppm ASTM D5185m △ 4355 15332 18479 CONTAMINANTS method limit/base current history history Silicon ppm ASTM D5185m >25 <1 1 1	Boron	ppm	ASTM D5185m		0	0	<1
Manganese ppm ASTM D5185m 0 0 0 Magnesium ppm ASTM D5185m 90 <1 <1 1 Calcium ppm ASTM D5185m 2 0 0 <1 <1 Phosphorus ppm ASTM D5185m △ 66 <1 <1 Zinc ppm ASTM D5185m 0 0 0 Sulfur ppm ASTM D5185m △ 4355 15332 18479 CONTAMINANTS method limit/base current history history Silicon ppm ASTM D5185m >25 <1 1 1	Barium	ppm	ASTM D5185m	90	0	0	0
Magnesium ppm ASTM D5185m 90 <1 <1 1 Calcium ppm ASTM D5185m 2 0 0 <1 Phosphorus ppm ASTM D5185m △ 66 <1 <1 Zinc ppm ASTM D5185m 0 0 0 Sulfur ppm ASTM D5185m △ 4355 15332 18479 CONTAMINANTS method limit/base current history history Silicon ppm ASTM D5185m >25 <1 1 1	Molybdenum	ppm	ASTM D5185m		0	0	0
Calcium ppm ASTM D5185m 2 0 0 <1 Phosphorus ppm ASTM D5185m ▲ 66 <1	Manganese	ppm	ASTM D5185m		0	0	0
Phosphorus ppm ASTM D5185m ▲ 66 <1 <1 Zinc ppm ASTM D5185m 0 0 0 0 Sulfur ppm ASTM D5185m ▲ 4355 15332 18479 CONTAMINANTS method limit/base current history 1 history Silicon ppm ASTM D5185m >25 <1 1 1	Magnesium	ppm	ASTM D5185m	90	<1	<1	1
Zinc ppm ASTM D5185m 0 0 0 Sulfur ppm ASTM D5185m ▲ 4355 15332 18479 CONTAMINANTS method limit/base current history 1 history Silicon ppm ASTM D5185m >25 <1 1 1	Calcium	ppm	ASTM D5185m	2	0	0	<1
Sulfur ppm ASTM D5185m ▲ 4355 15332 18479 CONTAMINANTS method limit/base current history 1 history Silicon ppm ASTM D5185m >25 <1 1 1	Phosphorus	ppm	ASTM D5185m		△ 66	<1	<1
CONTAMINANTS method limit/base current history 1 history Silicon ppm ASTM D5185m >25 <1	Zinc	ppm	ASTM D5185m		0	0	0
Silicon ppm ASTM D5185m >25 <1 1 1	Sulfur	ppm	ASTM D5185m		4355	15332	18479
	CONTAMINANTS		method	limit/base	current	history 1	history 2
Codium ACTM DE105m	Silicon	ppm	ASTM D5185m	>25	<1	1	1
Sodium ppm Asim usiosiii u i	Sodium	ppm	ASTM D5185m		0	1	0
Potassium ppm ASTM D5185m >20 0 <1	Potassium	ppm	ASTM D5185m	>20	0	0	<1
Water % ASTM D6304 >0.05 0.004 0.008 0.005	Water	%	ASTM D6304	>0.05	0.004	0.008	0.005
ppm Water ppm ASTM D6304 >500 40.3 85.3 57.1	ppm Water	ppm			40.3	85.3	57.1
FLUID CLEANLINESS method limit/base current history 1 history	FLUID CLEANLIN	ESS	method	limit/base	current	history 1	history 2
Particles >4μm ASTM D7647 1115 1281 18334	Particles >4µm		ASTM D7647		1115	1281	18334
Particles >6μm ASTM D7647 >1300 222 167 ▲ 5098	Particles >6µm		ASTM D7647	>1300	222	167	▲ 5098
Particles >14μm ASTM D7647 >80 16 29 Δ 168	Particles >14µm		ASTM D7647	>80	16	29	▲ 168
Particles >21μm ASTM D7647 >20 4 16 15	Particles >21µm		ASTM D7647	>20	4	16	15
Particles >38μm ASTM D7647 >4 0 3 2	Particles >38µm		ASTM D7647	>4	0	3	2
Particles >71μm ASTM D7647 >3 0 0	Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness ISO 4406 (c) >/17/13 17/15/11 15/12 \triangle 20/15	Oil Cleanliness		ISO 4406 (c)	>/17/13	17/15/11	15/12	<u>^</u> 20/15
FLUID DEGRADATION method limit/base current history 1 history	FLUID DEGRADA	TION	method	limit/base	current	history 1	history 2
Acid Number (AN) mg KOH/g ASTM D8045 0.4 0.35 0.60 0.566	Acid Number (AN)	mg KOH/g	ASTM D8045	0.4	0.35	0.60	



OIL ANALYSIS REPORT







Certificate L2367

Laboratory Sample No. Lab Number

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : KCP30969 : 05639667

: 10129197

Unique Number

Diagnostician : Doug Bogart Test Package : IND 2 (Additional Tests: KF, PrtCount)

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)

Dec19/21

Aug15/21

Received

Diagnosed

Apr10/22

: 13 Sep 2022

: 14 Sep 2022

CUSTOM BUILDING PRODUCTS INC

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USA 75050

Contact: SERVICE MANAGER

Contact/Location: SERVICE MANAGER - CUSGRAKC

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