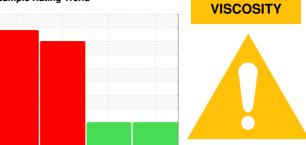


PROBLEM SUMMARY

Sample Rating Trend

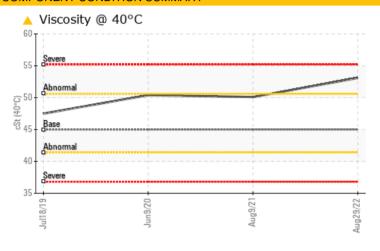


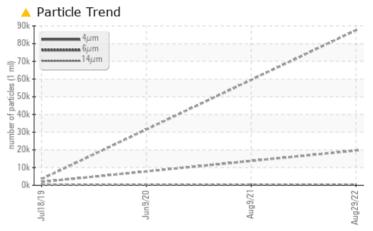
KAESER SK 15 6079849 (S/N 1018)

Compressor

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

COMPONENT CONDITION SUMMARY





RECOMMENDATION

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

PROBLEMATIC TEST RESULTS								
Sample Status				ABNORMAL	ABNORMAL	SEVERE		
Particles >6µm		ASTM D7647	>1300	19644				
Particles >14µm		ASTM D7647	>80	<u>▲</u> 551				
Particles >21µm		ASTM D7647	>20	^ 79				
Oil Cleanliness		ISO 4406 (c)	>/17/13	24/21/16				
Visc @ 40°C	cSt	ASTM D445	45	<u>▲</u> 53.1	50.1	50.4		

Customer Id: UNIMAT Sample No.: KCP30985 Lab Number: 05635005 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 ihester@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
Change Fluid			?	Oil and filter change at the time of sampling has been noted.
Change Filter			?	Oil and filter change at the time of sampling has been noted.

HISTORICAL DIAGNOSIS

09 Aug 2021 Diag: Jonathan Hester

WATER



Oil and 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. Moderate concentration of visible dirt/debris present in the oil. There is a light concentration of water present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



09 Jun 2020 Diag: Doug Bogart

WATER



Oil and 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. There is a moderate amount of visible silt present in the sample. Excessive free water present. There is a light concentration of water present in the oil. The AN level is acceptable for this fluid.

view report

18 Jul 2019 Diag: Jonathan Hester

WATER



Oil and filter change at the time of sampling has been noted. We recommend an early resample in 500 hours to monitor this condition. All component wear rates are normal. There is a high amount of particulates present in the oil. Excessive free water present. There is a light concentration of water 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

Sample Rating Trend

VISCOSITY

KAESER SK 15 6079849 (S/N 1018)

Compressor

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

DIAGNOSIS

Recommendation

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.

Contamination

There is a high amount of particulates present in the oil.

Fluid Condition

The oil viscosity is higher than normal. The AN level is acceptable for this fluid.

		Jul201:	9 Jun2020	Aug2021 A	ug2022	
SAMPLE INFORM	MATION	method	limit/base	current	history 1	history 2
Sample Number				KCP30985	KCP41566	KCP22752
Sample Date				29 Aug 2022	09 Aug 2021	09 Jun 2020
Machine Age	hrs			12232	9300	6393
Oil Age	hrs			3000	2000	2300
Oil Changed				Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	SEVERE
WEAR METALS		method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>50	1	<1	1
Chromium	ppm	ASTM D5185m	>10	0	0	0
Nickel	ppm	ASTM D5185m	>3	0	0	<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	32	19	23
Tin	ppm	ASTM D5185m	>10	0	<1	<1
Antimony	ppm	ASTM D5185m			0	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	<1
Cadmium ADDITIVES	ppm	ASTM D5185m method	limit/base	0 current	0 history 1	<1 history 2
	ppm		limit/base			
ADDITIVES		method		current	history 1	history 2
ADDITIVES Boron Barium	ppm	method ASTM D5185m	0	current 0	history 1	history 2 <1
ADDITIVES Boron Barium Molybdenum	ppm ppm	method ASTM D5185m ASTM D5185m	0	current 0 0	history 1 13	history 2 <1 4
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	0	current 0 0 0	history 1 13 0 0	history 2 <1 4 0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 90 0	current 0 0 0 0	history 1 13 0 0 0	history 2 <1 4 0 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 90 0	current 0 0 0 0 24	history 1 13 0 0 0 28	history 2 <1 4 0 <1 43
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 90 0 100	current 0 0 0 0 0 24 0	history 1 13 0 0 0 28	history 2 <1 4 0 <1 43 0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 90 0 100 0	current 0 0 0 0 0 24 0 3	history 1 13 0 0 0 28 0 2	history 2 <1 4 0 <1 43 0 3
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 90 0 100 0 0	current 0 0 0 0 0 24 0 3 59	history 1 13 0 0 0 28 0 2 17	history 2 <1 4 0 <1 43 0 3 0 18248
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 90 0 100 0 0 0 23500 limit/base	current 0 0 0 0 0 24 0 3 59 19667	history 1 13 0 0 0 28 0 2 17 17690	history 2 <1 4 0 <1 43 0 3 0 18248
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 90 0 100 0 0 0 23500 limit/base	current 0 0 0 0 24 0 3 59 19667 current	history 1 13 0 0 0 28 0 2 17 17690 history 1	history 2 <1 4 0 <1 43 0 3 0 18248 history 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 90 0 100 0 0 0 23500 limit/base	current 0 0 0 0 0 24 0 3 59 19667 current <1	history 1 13 0 0 0 28 0 2 17 17690 history 1 <1	history 2 <1 4 0 <1 43 0 3 0 18248 history 2 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 90 0 100 0 0 0 23500 limit/base >25	current 0 0 0 0 0 24 0 3 59 19667 current <1	history 1 13 0 0 0 28 0 2 17 17690 history 1 <1	history 2 <1 4 0 <1 43 0 3 0 18248 history 2 <1 6
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 90 0 100 0 0 23500 limit/base >25	current 0 0 0 0 0 24 0 3 59 19667 current <1 10 0	history 1 13 0 0 0 28 0 2 17 17690 history 1 <1 2 2	history 2 <1 4 0 <1 43 0 3 0 18248 history 2 <1 6 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 90 0 100 0 0 23500 limit/base >25 >20 >0.05	current 0 0 0 0 0 24 0 3 59 19667 current <1 10 0 0.024	history 1 13 0 0 0 28 0 2 17 17690 history 1 <1 12 2 0.103	history 2 <1 4 0 <1 43 0 3 0 18248 history 2 <1 6 2 0.475 4750
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water ppm Water FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D6304	0 90 0 100 0 0 23500 limit/base >25 >20 >0.05 >500	current 0 0 0 0 24 0 3 59 19667 current <1 10 0 0.024 249.5	history 1 13 0 0 0 28 0 2 17 17690 history 1 <1 12 2 △ 0.103 △ 1039.8	history 2 <1 4 0 <1 43 0 3 0 18248 history 2 <1 6 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water ppm Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 90 0 100 0 0 23500 limit/base >25 >20 >0.05 >500 limit/base	current 0 0 0 0 0 24 0 3 59 19667 current <1 10 0 0.024 249.5 current	history 1 13 0 0 0 28 0 2 17 17690 history 1 <1 12 2 △ 0.103 △ 1039.8 history 1	history 2 <1 4 0 <1 43 0 3 0 18248 history 2 <1 6 2 △ 0.475 △ 4750 history 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water ppm Water FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 ASTM D6304	0 90 0 100 0 0 23500 limit/base >25 >20 >0.05 >500 limit/base	current 0 0 0 0 24 0 3 59 19667 current <1 10 0 0.024 249.5 current 87582	history 1 13 0 0 0 28 0 2 17 17690 history 1 <1 12 2 ▲ 0.103 ▲ 1039.8 history 1	history 2 <1 4 0 <1 43 0 3 0 18248 history 2 <1 6 2 △ 0.475 △ 4750 history 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water ppm Water FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647	0 90 0 100 0 0 23500 limit/base >25 >20 >0.05 >500 limit/base	current 0 0 0 0 24 0 3 59 19667 current <1 10 0 0.024 249.5 current 87582 ▲ 19644	history 1 13 0 0 0 28 0 2 17 17690 history 1 <1 2 △ 0.103 △ 1039.8 history 1	history 2 <1 4 0 <1 43 0 3 0 18248 history 2 <1 6 2 △ 0.475 △ 4750 history 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water ppm Water FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647	0 90 0 100 0 0 23500 limit/base >25 >20 >0.05 >500 limit/base	current 0 0 0 0 24 0 3 59 19667 current <1 10 0 0.024 249.5 current 87582 ▲ 19644 ▲ 551	history 1 13 0 0 0 28 0 2 17 17690 history 1 <1 2 ▲ 0.103 ▲ 1039.8 history 1	history 2 <1 4 0 <1 43 0 3 0 18248 history 2 <1 6 2 ▲ 0.475 ▲ 4750 history 2

Oil Cleanliness

Acid Number (AN)

FLUID DEGRADATION

method

ISO 4406 (c) >--/17/13 **424/21/16**

limit/base

current

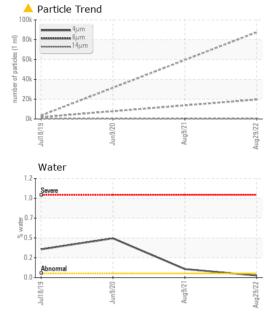
history 1

history 2

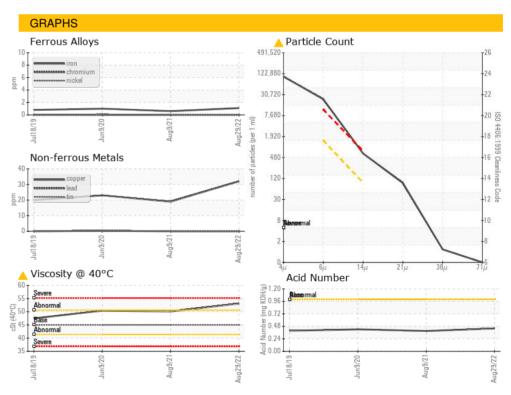
0.423



OIL ANALYSIS REPORT



VISUAL		method	limit/base	current	history 1	history 2
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	▲ MODER
Debris	scalar	*Visual	NONE	NONE	▲ MODER	VLITE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	▲ LAYRD
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG	0.2%
Free Water	scalar	*Visual		NEG	NEG	5.0
FLUID PROPERT	IES	method	limit/base	current	history 1	history 2
Visc @ 40°C	cSt	ASTM D445	45	▲ 53.1	50.1	50.4
SAMPLE IMAGES	3	method	limit/base	current	history 1	history 2
Color						
Bottom						







Laboratory Sample No.

Lab Number Unique Number : 10124535

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : KCP30985 : 05635005

Received Diagnosed

Diagnostician : Jonathan Hester

: 06 Sep 2022 : 08 Sep 2022

MATTHEWS, NC USA 28104 Contact: Service Manager

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)

T:

F:

UNITED VENEER

5003 SMITH FARM RD