

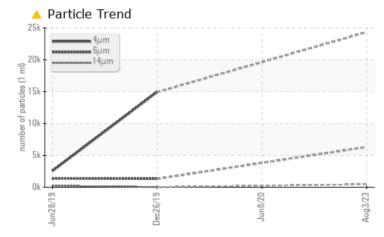
## **PROBLEM SUMMARY**

KAESER CSD 75 6457436 (S/N 1470)

Compressor

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

### COMPONENT CONDITION SUMMARY



### 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 TES	ST RESULTS				
Sample Status			ABNORMAL	ABNORMAL	ATTENTION
Particles >6µm	ASTM D7647	>1300	<u> </u>		<b>1</b> 325
Particles >14µm	ASTM D7647	>80	<b>468</b>		22
Particles >21µm	ASTM D7647	>20	🔺 111		11
Oil Cleanliness	ISO 4406 (c)	>/17/13	<u> 22/20/16</u>		🔺 18/12

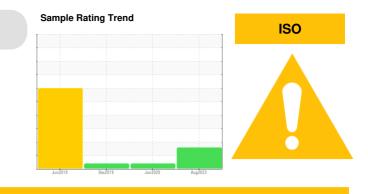
Customer Id: OLDMIA Sample No.: KC05926143 Lab Number: 05926143 Test Package: IND 2



To manage this report scan the QR code

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

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



There are no recommended actions for this sample.

### HISTORICAL DIAGNOSIS

### 08 Jun 2020 Diag: Don Baldridge

VIS DEBRIS



We recommend you service the filters on this component. 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.



#### 26 Dec 2019 Diag: Jonathan Hester



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.



### WATER



28 Jun 2019 Diag: Don Baldridge

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.All component wear rates are normal. There is a high amount of particulates present in the oil. High concentration of visible dirt/debris present in the oil. There is a moderate concentration of water present in the oil. Free water present. The AN level is acceptable for this fluid.





## **OIL ANALYSIS REPORT**

# KAESER CSD 75 6457436 (S/N 1470)

Compressor

KAESER SIGMA (OEM) S-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

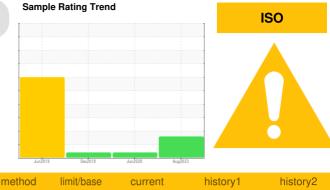
All component wear rates are normal.

### 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 INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		KC05926143	KC87507	KC74066
Sample Date		Client Info		03 Aug 2023	08 Jun 2020	26 Dec 2019
Machine Age	hrs	Client Info		15148	4296	2957
Oil Age	hrs	Client Info		0	0	2957
Oil Changed		Client Info		N/A	Not Changd	Changed
Sample Status				ABNORMAL	ABNORMAL	ATTENTION
WEAR METALS		method	limit/base	current	history1	history2
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	<1	0
Aluminum	ppm	ASTM D5185m	>10	0	3	2
Lead	ppm	ASTM D5185m	>10	0	0	<1
Copper	ppm	ASTM D5185m	>50	9	7	8
Tin	ppm	ASTM D5185m	>10	0	0	0
Antimony	ppm	ASTM D5185m			0	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	2	0
Boron	pp			•	_	-
Barium	ppm	ASTM D5185m	90	<1	<1	<1
			90			
Barium	ppm	ASTM D5185m	90	<1	<1	<1
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	90 90	<1 0	<1 0	<1 0
Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	90	<1 0 <1	<1 0 <1	<1 0 <1
Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	90	<1 0 <1 2	<1 0 <1 33	<1 0 <1 7
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	90	<1 0 <1 2 <1	<1 0 <1 33 2	<1 0 <1 7 <1
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	90	<1 0 <1 2 <1 <1	<1 0 <1 33 2 <1	<1 0 <1 7 <1 2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	90 2 limit/base	<1 0 <1 2 <1 <1 <1 3	<1 0 <1 33 2 <1 62	<1 0 <1 7 <1 2 23
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	90 2 limit/base	<1 0 <1 2 <1 <1 <1 3 Current	<1 0 <1 33 2 <1 62 history1	<1 0 <1 7 <1 2 23 history2
Barium Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	90 2 limit/base	<1 0 <1 2 <1 <1 <1 3 <i>current</i>	<1 0 <1 33 2 <1 62 history1 <1	<1 0 <1 7 <1 2 23 history2 1
Barium Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Zinc CONTAMINANTS Silicon Sodium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	90 2 limit/base >25 >20	<1 0 <1 2 <1 <1 <1 3 <i>current</i> 1 8	<1 0 <1 33 2 <1 62 history1 <1 32	<1 0 <1 7 <1 2 23 history2 1 8
Barium Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Zinc CONTAMINANTS Silicon Sodium Potassium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	90 2 limit/base >25 >20	<1 0 <1 2 <1 <1 <1 3	<1 0 <1 33 2 <1 62 history1 <1 32 16	<1 0 <1 7 <1 2 23 history2 1 8 8 8
Barium Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Zinc CONTAMINANTS Silicon Sodium Potassium Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	90 2 limit/base >25 >20 >0.05	<1 0 <1 2 <1 <1 <1 3 <u>current</u> 1 8 6 0.007	<1 0 <1 33 2 <1 62 history1 <1 32 16 0.048	<1 0 <1 7 <1 2 23 history2 1 8 8 8 0.025
Barium Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Zinc CONTAMINANTS Silicon Sodium Potassium Water ppm Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm % ppm	ASTM D5185m ASTM D6304	90 2 limit/base >25 >20 >20 >0.05 >500	<1 0 <1 2 <1 <1 3 <i>current</i> 1 8 6 0.007 71.9	<1 0 <1 33 2 <1 62 history1 <1 32 16 0.048 486.2	<1 0 <1 7 <1 2 23 history2 1 8 8 8 0.025 254.8
Barium Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc CONTAMINANTS Silicon Sodium Potassium Water ppm Water FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304	90 2 limit/base >25 >20 >20 >500 limit/base	<1 0 <1 2 <1 <1 <1 3 current 1 8 6 0.007 71.9 current	<1 0 <1 33 2 <1 62 history1 <1 32 16 0.048 486.2 history1	<1 0 <1 7 <1 2 23 history2 1 8 8 0.025 254.8 history2
Barium Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Zinc CONTAMINANTS Silicon Sodium Potassium Vater pm Water FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 ASTM D6304	90 2 limit/base >25 >20 >20 >500 limit/base	<1 0 <1 2 <1 <1 3	<1 0 <1 33 2 <1 62 history1 <1 32 16 0.048 486.2 history1 	<1 0 <1 7 <1 2 23 history2 1 8 8 8 0.025 254.8 history2 14923
Barium Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Zinc CONTAMINANTS Silicon Sodium Potassium Vater ppm Water FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm % ppm	ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 ASTM D7647	90 2 2 limit/base >25 >20 >20 >0.05 >500 limit/base >1300	<1 0 <1 2 <1 <1 3 0 0 0 0 7 1 9 6 0.007 7 1.9 24344 ▲ 6314	<1 0 <1 33 2 <1 62 history1 <1 32 16 0.048 486.2 history1 	<1 0 <1 7 <1 2 23 history2 1 8 8 0.025 254.8 history2 14923 ↓ 1325
Barium Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Zinc CONTAMINANTS Silicon Sodium Potassium Vater Potassium Water Potassium FLUID CLEANLIN Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm % ppm	ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647	90 2 2 Iimit/base >25 >20 >0.05 >500 Iimit/base >1300 >80	<1 0 <1 2 <1 2 <1 3 <1 3  current 1 8 6 0.007 71.9  current 24344  6314	<1 0 <1 33 2 <1 62 history1 <1 32 16 0.048 486.2 history1 	<1 0 <1 7 <1 2 2 3 3 history2 1 8 8 0.025 254.8 0.025 254.8 14923 14923 ▲ 1325 22
Barium Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Zinc CONTAMINANTS Silicon Sodium Potassium Vater ppm Water FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm % ppm	ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	90 2 2 Iimit/base >25 >20 >0.05 >500 Iimit/base >300 >80 >20 >20 >30	<1 0 <1 2 <1 <1 3 <u>current</u> 1 8 6 0.007 71.9 <u>current</u> 24344 ▲ 6314 ▲ 468 ▲ 111	<1 0 <1 33 2 <1 62 history1 <1 32 16 0.048 486.2 history1  	<1 0 <1 7 <1 2 23 23 history2 1 8 8 0.025 254.8 0.025 254.8 history2 14923 ↓ 1325 22 11

FLUID DEGRADATION

Acid Number (AN)

method

mg KOH/g ASTM D8045 0.4

limit/base

0.333

history1

current

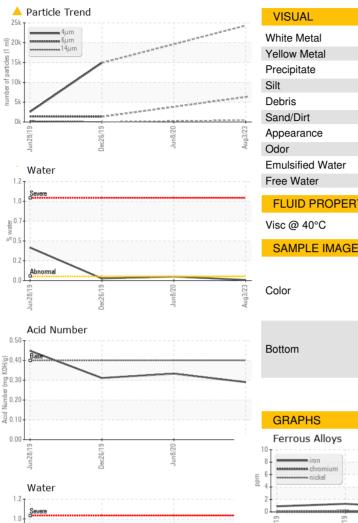
0.29

history2

0.311



## **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	LIGHT	🔺 MODER	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 PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46	46.6	44.3	44.8
SAMPLE IMAGES	;	method	limit/base	current	history1	history2
			_			
Color						

