

### **OIL ANALYSIS REPORT**



Machine Id

# KAESER BSD 50 6347516 (S/N 1872)

Component Compressor Fluid

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. Moderate concentration of visible dirt/debris present in the oil.

#### Fluid Condition

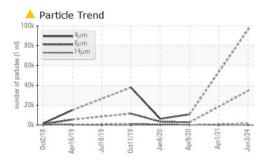
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

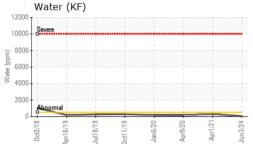
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		KC06219668	KC86852	KC74059
Sample Date		Client Info		03 Jun 2024	01 Apr 2021	09 Apr 2020
Machine Age	hrs	Client Info		31934	13539	8200
Oil Age	hrs	Client Info		0	5339	0
Oil Changed		Client Info		N/A	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	0	<1	<1
Chromium	ppm	ASTM D5185m	>10	0	0	0
Nickel	ppm	ASTM D5185m	>3	0	0	0
Titanium	ppm	ASTM D5185m	>3	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>10	0	<1	<1
Lead	ppm	ASTM D5185m	>10	0	0	<1
Copper	ppm	ASTM D5185m		12	22	16
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	1-1-1-1	method	limit/base	current	history1	history2
			IIIIII/Dase			
Boron	ppm	ASTM D5185m	00	0	7	0
Barium	ppm	ASTM D5185m	90	0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m	00	0	0	<1
Magnesium	ppm	ASTM D5185m ASTM D5185m	90	0	13	15
0.1.1		ASTM D5185m	2	0	0	0
Calcium	ppm			-		
Phosphorus	ppm	ASTM D5185m		0	3	<1
Phosphorus				-		<1 37
Phosphorus	ppm	ASTM D5185m ASTM D5185m method	limit/base	0	3	
Phosphorus Zinc CONTAMINANTS Silicon	ppm	ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	limit/base	0 0 current 0	3 54 history1 0	37 history2 1
Phosphorus Zinc CONTAMINANTS	ppm ppm	ASTM D5185m ASTM D5185m method	limit/base	0 0 current 0 2	3 54 history1 0 24	37 history2 1 14
Phosphorus Zinc CONTAMINANTS Silicon Sodium Potassium	ppm ppm	ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	limit/base	0 0 current 0	3 54 history1 0	37 history2 1
Phosphorus Zinc CONTAMINANTS Silicon Sodium Potassium Water	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304	limit/base >25 >20 >0.05	0 0 current 0 2	3 54 history1 0 24	37 history2 1 14
Phosphorus Zinc CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >25 >20 >0.05	0 0 current 0 2 <1	3 54 history1 0 24 10	37 history2 1 14 9
Phosphorus Zinc CONTAMINANTS Silicon Sodium Potassium Water	ppm ppm ppm ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304	limit/base >25 >20 >0.05	0 0 current 0 2 <1 0.005	3 54 history1 0 24 10 0.028	37 history2 1 14 9 0.014
Phosphorus Zinc CONTAMINANTS Silicon Sodium Potassium Water ppm Water FLUID CLEANLINI Particles >4µm	ppm ppm ppm ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 ASTM D6304	limit/base >25 >20 >0.05 >500 limit/base	0 0 current 0 2 <1 0.005 59 current 96095	3 54 history1 0 24 10 0.028 287.7	37 history2 1 14 9 0.014 143.6 history2 10689
Phosphorus Zinc CONTAMINANTS Silicon Sodium Potassium Water ppm Water FLUID CLEANLINI Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 method	limit/base >25 >20 >0.05 >500 limit/base	0 0 2 <1 0.005 59 current 96095 ▲ 34466	3 54 history1 0 24 10 0.028 287.7	37 history2 1 14 9 0.014 143.6 history2
Phosphorus Zinc CONTAMINANTS Silicon Sodium Potassium Water ppm Water FLUID CLEANLINI Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5304 ASTM D6304 ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647	limit/base >25 >20 >0.05 >500 limit/base >1300 >80	0 0 2 <1 0.005 59 <u>current</u> 96095 ▲ 34466 ▲ 1754	3 54 history1 0 24 10 0.028 287.7	37 history2 1 14 9 0.014 143.6 history2 10689 ▲ 2581 ▲ 131
Phosphorus Zinc CONTAMINANTS Silicon Sodium Potassium Water ppm Water FLUID CLEANLINI Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5304 ASTM D6304 ASTM D6304 ASTM D6304 ASTM D7647	limit/base >25 >20 >0.05 >500 limit/base >1300 >80	0 0 2 <1 0.005 59 current 96095 ▲ 34466	3 54 history1 0 24 10 0.028 287.7	37 history2 1 14 9 0.014 143.6 history2 10689 ▲ 2581
Phosphorus Zinc CONTAMINANTS Silicon Sodium Potassium Water ppm Water FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5304 ASTM D6304 ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647	limit/base >25 >20 >0.05 >500 limit/base >1300 >80	0 0 2 <1 0.005 59 <u>current</u> 96095 ▲ 34466 ▲ 1754 ▲ 372 ▲ 20	3 54 history1 0 24 10 0.028 287.7 history1 	37 history2 1 14 9 0.014 143.6 history2 10689 ▲ 2581 ▲ 131
Phosphorus Zinc CONTAMINANTS Silicon Sodium Potassium Water ppm Water FLUID CLEANLINI Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm ppm ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	limit/base >25 >20 >0.05 >500 limit/base >1300 >80 >20 >4	0 0 2 <1 0.005 59 <u>current</u> 96095 ▲ 34466 ▲ 1754 ▲ 372	3 54 history1 0 24 10 0.028 287.7 history1  	37 history2 1 14 9 0.014 143.6 143.6 history2 10689 ▲ 2581 ▲ 131 ▲ 131 ▲ 46 3 0
Phosphorus Zinc CONTAMINANTS Silicon Sodium Potassium Water ppm Water FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm ppm ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	limit/base >25 >20 >0.05 >500 limit/base >1300 >80 >20 >4	0 0 2 <1 0.005 59 <u>current</u> 96095 ▲ 34466 ▲ 1754 ▲ 372 ▲ 20	3 54 history1 0 24 10 0.028 287.7 history1  	37 history2 1 14 9 0.014 143.6 history2 10689 ▲ 2581 ▲ 131 ▲ 46 3
Phosphorus Zinc CONTAMINANTS Silicon Sodium Potassium Water ppm Water FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm % ppm ESS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	limit/base >25 >20 >0.05 >500 limit/base >1300 >80 >20 >4 >3	0 0 2 <1 0.005 59 current 96095 ▲ 34466 ▲ 1754 ▲ 372 20 2	3 54 history1 0 24 10 0.028 287.7 history1   	37 history2 1 14 9 0.014 143.6 143.6 history2 10689 ▲ 2581 ▲ 131 ▲ 131 ▲ 46 3 0

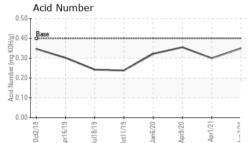
Contact/Location: W. MONEGRO - SCHHIA Page 1 of 2

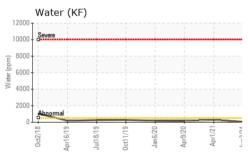


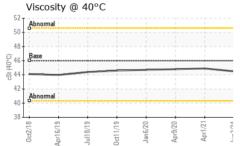
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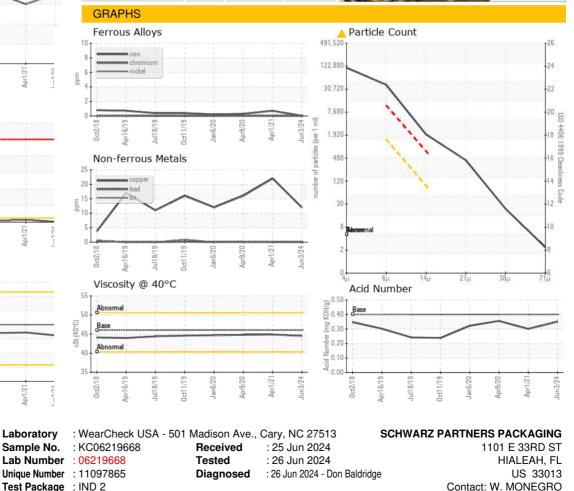


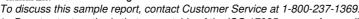
#### VISUAL method limit/base current history1 history2 NONE NONE White Metal \*Visual NONE NONE scalar Yellow Metal \*Visual NONE NONE NONE NONE scalar Precipitate NONE NONE NONE scalar \*Visual NONE Silt scalar \*Visual NONE NONE LIGHT NONE Debris \*Visual NONE MODER MODER NONE scalar Sand/Dirt NONE NONE NONE NONE scalar \*Visual NORML NORML Appearance scalar \*Visual NORML NORML Odor \*Visual NORML NORML NORML scalar NORML \*Visual **Emulsified Water** scalar >0.05 NEG NEG NEG Free Water scalar \*Visual NEG NEG NEG FLUID PROPERTIES method limit/base curren history history2 Visc @ 40°C cSt ASTM D445 46 44.5 44.9 44.8 SAMPLE IMAGES method limit/base history2 current history1

Color



Bottom





\* - 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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Certificate 12367

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