

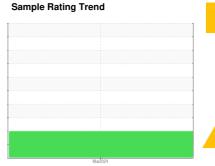
**OIL ANALYSIS REPORT** 

# KAESER 3545899 (S/N 1173)

Component

Compressor

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





## **DIAGNOSIS**

### Recommendation

The filter change at the time of sampling has been noted. We were unable to perform a particle count due to a high concentration of particles present in this sample. We advise that you stop the unit and follow the water drain-off procedure for this component. We recommend an early resample in 500 hours to monitor this condition.

All component wear rates are normal.

# Contamination

There is a light concentration of water present in the oil. High concentration of visible dirt/debris present in the oil.

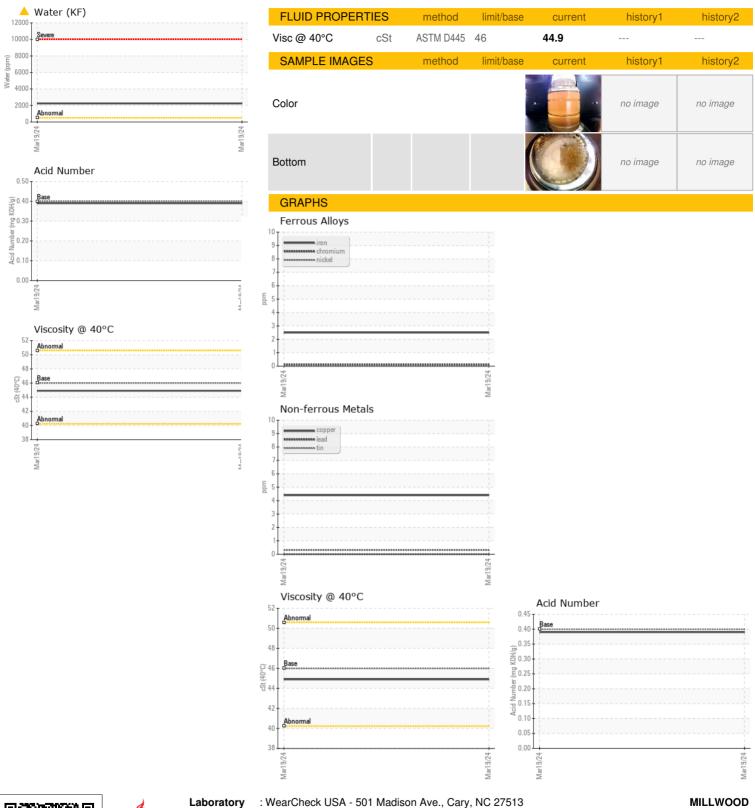
### **Fluid Condition**

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

Sample Number					Mar2024		
Sample Date	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age   hrs   Client Info   700	Sample Number		Client Info		KC99647		
Machine Age         hrs         Client Info         40835			Client Info		19 Mar 2024		
Cilient Info	•	hrs	Client Info				
MEAR METALS	Oil Age	hrs	Client Info		700		
MEAR METALS	Oil Changed		Client Info		Not Changd		
Chromium					_		
Chromium         ppm         ASTM D5185m         >10         <1             Nickel         ppm         ASTM D5185m         >3         0             Titanium         ppm         ASTM D5185m         >3         0             Silver         ppm         ASTM D5185m         >2         0             Aluminum         ppm         ASTM D5185m         >10         0             Lead         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >10         <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>50	2		
Description	Chromium	ppm	ASTM D5185m	>10	<1		
Aluminum	Nickel	ppm	ASTM D5185m	>3	0		
Alliminum	Titanium	ppm	ASTM D5185m	>3	0		
Lead	Silver	ppm	ASTM D5185m	>2	0		
Copper	Aluminum	ppm	ASTM D5185m	>10	0		
Copper	ead		ASTM D5185m	>10	0		
ASTM D5185m   D	Copper		ASTM D5185m	>50	4		
Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history1           Boron         ppm         ASTM D5185m         0             Molybdenum         ppm         ASTM D5185m         < 1             Magnesium         ppm         ASTM D5185m         < 1             Magnesium         ppm         ASTM D5185m         90         67             Calcium         ppm         ASTM D5185m         90         67             Phosphorus         ppm         ASTM D5185m         2         4             Zinc         ppm         ASTM D5185m         1             Zinc         ppm         ASTM D5185m         >25         <1             CONTAMINANTS         method         limit/base         current         history1         history           Sailicon         ppm         ASTM D5185m         >25         <1             Sodidum<			ASTM D5185m	>10	<1		
Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history1           Boron         ppm         ASTM D5185m         0             Molybdenum         ppm         ASTM D5185m         < 1             Magnesium         ppm         ASTM D5185m         < 1             Magnesium         ppm         ASTM D5185m         90         67             Calcium         ppm         ASTM D5185m         90         67             Phosphorus         ppm         ASTM D5185m         2         4             Zinc         ppm         ASTM D5185m         1             Zinc         ppm         ASTM D5185m         >25         <1             CONTAMINANTS         method         limit/base         current         history1         history           Sailicon         ppm         ASTM D5185m         >25         <1             Sodidum<	Vanadium		ASTM D5185m		0		
Boron ppm ASTM D5185m 90 28	Cadmium	ppm	ASTM D5185m		0		
Barium ppm ASTM D5185m 90 28  Molybdenum ppm ASTM D5185m <1  Manganese ppm ASTM D5185m <1  Magnesium ppm ASTM D5185m 90 67  Calcium ppm ASTM D5185m 2 4  Phosphorus ppm ASTM D5185m 1  Zinc ppm ASTM D5185m 1  CONTAMINANTS method limit/base current history1 histor  Silicon ppm ASTM D5185m >25 <1  Sodium ppm ASTM D5185m >25 <1  Potassium ppm ASTM D5185m >20 <1  Water % ASTM D5185m >20 <1  Water % ASTM D5185m >20 <1  Popm Water ppm ASTM D5185m >20 <1  FLUID DEGRADATION method limit/base current history1 histor  Acid Number (AN) mg KOHg ASTM D8045 0.4 0.39  VISUAL method limit/base current history1 histor  White Metal scalar *Visual NONE NONE  Yellow Metal scalar *Visual NONE NONE  Silt scalar *Visual NONE NONE  Silt scalar *Visual NONE NONE  Precipitate scalar *Visual NONE NONE  Sand/Dirt scalar *Visual NONE NONE  Appearance scalar *Visual NORML NORML  Appearance scalar *Visual NORML NORML  Emulsified Water scalar *Visual NORML NORML  Emulsified Water scalar *Visual NORML NORML	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         <1             Manganese         ppm         ASTM D5185m         <1	Boron	ppm	ASTM D5185m		0		
Molybdenum         ppm         ASTM D5185m         <1             Manganese         ppm         ASTM D5185m         <1	Barium	ppm	ASTM D5185m	90	28		
Manganese         ppm         ASTM D5185m         <1             Magnesium         ppm         ASTM D5185m         90         67             Calcium         ppm         ASTM D5185m         2         4             Phosphorus         ppm         ASTM D5185m         1             Zinc         ppm         ASTM D5185m         43             CONTAMINANTS         method         limit/base         current         history1         history1           Silicon         ppm         ASTM D5185m         >25         <1	Molybdenum	ppm	ASTM D5185m		<1		
Magnesium         ppm         ASTM D5185m         90         67             Calcium         ppm         ASTM D5185m         2         4             Phosphorus         ppm         ASTM D5185m         1             Zinc         ppm         ASTM D5185m         43             CONTAMINANTS         method         limit/base         current         history1         history1           Solicon         ppm         ASTM D5185m         >25         <1	•	ppm	ASTM D5185m		<1		
Calcium         ppm         ASTM D5185m         2         4             Phosphorus         ppm         ASTM D5185m         1             Zinc         ppm         ASTM D5185m         43             CONTAMINANTS         method         limit/base         current         history1         history1           Silicon         ppm         ASTM D5185m         >25         <1	-		ASTM D5185m	90	67		
CONTAMINANTS	Calcium	ppm	ASTM D5185m	2	4		
CONTAMINANTS	Phosphorus	ppm	ASTM D5185m		1		
Silicon		ppm	ASTM D5185m		43		
Sodium	CONTAMINANTS	3	method	limit/base	current	history1	history2
Potassium         ppm         ASTM D5185m         >20         <1             Water         %         ASTM D6304         >0.05         0.224             opm Water         ppm         ASTM D6304         >500         2240             FLUID DEGRADATION         method         limit/base         current         history1         history1           Acid Number (AN)         mg KOHlg         ASTM D8045         0.4         0.39             VISUAL         method         limit/base         current         history1         history1           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            Sand/Dirt         scalar         *Visual         NORML         NORML </td <td>Silicon</td> <td>ppm</td> <td>ASTM D5185m</td> <td>&gt;25</td> <td>&lt;1</td> <td></td> <td></td>	Silicon	ppm	ASTM D5185m	>25	<1		
Potassium         ppm         ASTM D5185m         >20         <1             Water         %         ASTM D6304         >0.05         0.224             opm Water         ppm         ASTM D6304         >500         2240             FLUID DEGRADATION         method         limit/base         current         history1         history1           Acid Number (AN)         mg KOHlg         ASTM D8045         0.4         0.39             VISUAL         method         limit/base         current         history1         history1         history1           White Metal         scalar         *Visual         NONE             Yellow Metal         scalar         *Visual         NONE         NONE            Precipitate         scalar         *Visual         NONE         NONE            Debris         scalar         *Visual         NONE         NONE            Sand/Dirt         scalar         *Visual         NORML         NORML            Appearance         scalar         *Visual         NORML	Sodium		ASTM D5185m		15		
Water         %         ASTM D6304         >0.05         ▲ 0.224             opm Water         ppm         ASTM D6304         >500         ▲ 2240             FLUID DEGRADATION         method         limit/base         current         history1         history1           Acid Number (AN)         mg KOH/g         ASTM D8045         0.4         0.39             VISUAL         method         limit/base         current         history1         history1           White Metal         scalar         *Visual         NONE             Yellow Metal         scalar         *Visual         NONE         NONE            Precipitate         scalar         *Visual         NONE         NONE            Precipitate         scalar         *Visual         NONE         NONE            Debris         scalar         *Visual         NONE         NONE            Debris         scalar         *Visual         NONE         NONE            Sand/Dirt         scalar         *Visual         NORML         NORML	Potassium			>20	<1		
Opm Water         ppm         ASTM D6304         >500         ▲ 2240             FLUID DEGRADATION         method         limit/base         current         history1         history1           Acid Number (AN)         mg KOH/g         ASTM D8045         0.4         0.39             VISUAL         method         limit/base         current         history1         history1           White Metal         scalar         *Visual         NONE             Yellow Metal         scalar         *Visual         NONE         NONE             Precipitate         scalar         *Visual         NONE         NONE             Silt         scalar         *Visual         NONE         NONE             Debris         scalar         *Visual         NONE         NONE             Sand/Dirt         scalar         *Visual         NORML         NORML             Appearance         scalar         *Visual         NORML         NORML             Emulsified Water         scalar <td>Nater</td> <td></td> <td>ASTM D6304</td> <td>&gt;0.05</td> <td><b>△</b> 0.224</td> <td></td> <td></td>	Nater		ASTM D6304	>0.05	<b>△</b> 0.224		
Acid Number (AN)   mg KOH/g   ASTM D8045   0.4   0.39	opm Water	ppm	ASTM D6304	>500	<b>2240</b>		
VISUAL method limit/base current history1 history  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  Sand/Dirt scalar *Visual NONE NONE  Appearance scalar *Visual NORML NORML  Codor scalar *Visual NORML NORML  Emulsified Water scalar *Visual >0.05 0.2%	FLUID DEGRADA	ATION	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             Sand/Dirt         scalar         *Visual         NORML         NORML             Appearance         scalar         *Visual         NORML         NORML             Emulsified Water         scalar         *Visual         >0.05         0.2%	Acid Number (AN)	mg KOH/g	ASTM D8045	0.4	0.39		
Yellow Metal         scalar         *Visual         NONE         NONE             Precipitate         scalar         *Visual         NONE         NONE             Silt         scalar         *Visual         NONE         NONE             Debris         scalar         *Visual         NONE         HEAVY             Sand/Dirt         scalar         *Visual         NONE         NONE             Appearance         scalar         *Visual         NORML         NORML             Emulsified Water         scalar         *Visual         >0.05         0.2%	VISUAL		method	limit/base	current	history1	history2
Precipitate scalar *Visual NONE NONE  Silt scalar *Visual NONE NONE  Debris scalar *Visual NONE HEAVY  Sand/Dirt scalar *Visual NONE NONE  Appearance scalar *Visual NORML NORML  Ddor scalar *Visual NORML NORML  Emulsified Water scalar *Visual >0.05 0.2%	White Metal	scalar	*Visual	NONE	NONE		
Silt scalar *Visual NONE NONE Debris scalar *Visual NONE HEAVY Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Odor scalar *Visual NORML NORML Emulsified Water scalar *Visual >0.05 0.2%	Yellow Metal	scalar	*Visual	NONE	NONE		
Debris scalar *Visual NONE HEAVY Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Dodor scalar *Visual NORML NORML Emulsified Water scalar *Visual >0.05 0.2%	Precipitate	scalar	*Visual	NONE	NONE		
Debris         scalar         *Visual         NONE         HEAVY             Sand/Dirt         scalar         *Visual         NONE         NONE             Appearance         scalar         *Visual         NORML         NORML             Ddor         scalar         *Visual         NORML         NORML             Emulsified Water         scalar         *Visual         >0.05         0.2%	Silt	scalar	*Visual	NONE	NONE		
Appearance scalar *Visual NORML NORML Odor scalar *Visual NORML NORML Emulsified Water scalar *Visual >0.05 0.2%	Debris	scalar		NONE	▲ HEAVY		
Appearance scalar *Visual NORML NORML Odor scalar *Visual NORML NORML Emulsified Water scalar *Visual >0.05 0.2%	Sand/Dirt	scalar	*Visual	NONE	NONE		
Odor scalar *Visual NORML NORML Emulsified Water scalar *Visual >0.05 0.2%		scalar					
Emulsified Water scalar *Visual >0.05 <b>0.2%</b>	• •						
	Free Water	scalar	*Visual		NEG	tion:-Service Ma	anager - MILS



# **OIL ANALYSIS REPORT**





Certificate L2367

Laboratory Sample No.

: KC99647 Lab Number : 06124947

Unique Number : 10939098 Test Package : IND 2

Received : 21 Mar 2024 **Tested** 

: 26 Mar 2024 : 26 Mar 2024 - Jonathan Hester Diagnosed

MILLWOOD 321 STANDING SPRINGS CT 4 SIMPSONVILLE, SC

US 29680 Contact: Service Manager

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)

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F: