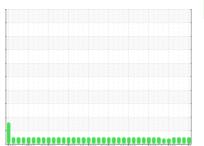


# **OIL ANALYSIS REPORT**

Sample Rating Trend



**NORMAL** 



# KAESER 2011093-MSI SOUTHEAST (S/N 1097)

Compressor

KAESER SIGMA (OEM) S-460 (5 GAL)

## Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the

## Fluid Condition

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

Sample Date			c2004 Jul200	9 Feb 2011 Apr 2012 May 2	013 Feb2015 Mar2016 Jun2017 N	lov2020 Nov20	
Client Info	SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Machine Age   hrs   Client Info   118463   118461   118437   11849   118497   11849   118497   11849	Sample Number		Client Info		WC0863710	WC0795312	WC0730168
Dil Age	Sample Date		Client Info		08 Nov 2023	22 May 2023	02 Nov 2022
Coli Changed   Client Info   Changed   Not Changed   Normal   No	Machine Age	hrs	Client Info		118463	118461	118437
NORMAL   NORMAL   NORMAL   NORMAL	Oil Age	hrs	Client Info		100	25	11
CONTAMINATION         method         limit/base         current         history1         history2           Water         WC Method         >0.05         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         0         0         <1           Chromium         ppm         ASTM D5185m         >10         0         0         0           Nickel         ppm         ASTM D5185m         >3         0         0         0           Silver         ppm         ASTM D5185m         >3         0         0         0           Lead         ppm         ASTM D5185m         >10         0         0         1           Lead         ppm         ASTM D5185m         >10         0         0         0           Copper         ppm         ASTM D5185m         >10         0         0         0           Vanadium         ppm         ASTM D5185m         0         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0         0	Oil Changed		Client Info		Changed	Not Changd	Changed
Water         WC Method         >0.05         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         0         0         <1	Sample Status				NORMAL	NORMAL	NORMAL
WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         0         0         <1           Chromium         ppm         ASTM D5185m         >10         0         0         0           Nickel         ppm         ASTM D5185m         >3         0         <1         0           Titalnium         ppm         ASTM D5185m         >2         0         <1         <1           Aluminum         ppm         ASTM D5185m         >10         0         0         <1           Aluminum         ppm         ASTM D5185m         >10         0         0         <1           Lead         ppm         ASTM D5185m         >10         0         0         <1           Lead         ppm         ASTM D5185m         >10         0         0         0           Copper         ppm         ASTM D5185m         >10         0         0         0           Capper         ppm         ASTM D5185m         0         0         0         0           Capper         ppm         ASTM D5185m         0         0         0 <t< th=""><th>CONTAMINATIO</th><th>N</th><th>method</th><th>limit/base</th><th>current</th><th>history1</th><th>history2</th></t<>	CONTAMINATIO	N	method	limit/base	current	history1	history2
Iron	Water		WC Method	>0.05	NEG	NEG	NEG
Chromium         ppm         ASTM D5185m         >10         0         0         0           Nickel         ppm         ASTM D5185m         >3         0         <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>50	0	0	<1
Titanium	Chromium	ppm	ASTM D5185m	>10	0	0	0
Silver	Nickel	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	Titanium	ppm	ASTM D5185m	>3	0	0	0
Lead	Silver	ppm	ASTM D5185m	>2	0	<1	<1
Copper         ppm         ASTM D5185m         >50         <1         <1         <1           Tin         ppm         ASTM D5185m         >10         0         0         0           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         history1         history2           Boron         ppm         ASTM D5185m         0         0         0           Barium         ppm         ASTM D5185m         90         53         59         0           Molybdenum         ppm         ASTM D5185m         0         0         0           Magnesium         ppm         ASTM D5185m         <1	Aluminum	ppm	ASTM D5185m	>10	0	0	<1
Tin	Lead	ppm	ASTM D5185m	>10	0	0	0
Antimony         ppm         ASTM D5185m  0         0           ADDTVES         method         limit/base         current         history1         ASTM D5185m         90         90         85         86         73         73         72         73         73         73         73         73         74         74         74 </td <td>Copper</td> <td>ppm</td> <td>ASTM D5185m</td> <td>&gt;50</td> <th>&lt;1</th> <td>&lt;1</td> <td>&lt;1</td>	Copper	ppm	ASTM D5185m	>50	<1	<1	<1
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         0         0           Barium         ppm         ASTM D5185m         90         53         59         0           Molybdenum         ppm         ASTM D5185m         0         0         0         0           Magnesium         ppm         ASTM D5185m         <1         0         0         0           Magnesium         ppm         ASTM D5185m         2         2         2         <1           Calcium         ppm         ASTM D5185m         2         2         2         <1           Phosphorus         ppm         ASTM D5185m         3         0         0         0           Zinc         ppm         ASTM D5185m         18741         20361         23212           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon <t< td=""><td>Tin</td><td>ppm</td><td>ASTM D5185m</td><td>&gt;10</td><th>0</th><td>0</td><td>0</td></t<>	Tin	ppm	ASTM D5185m	>10	0	0	0
Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         0           Barium         ppm         ASTM D5185m         90         53         59         0           Molybdenum         ppm         ASTM D5185m         0         0         0           Manganese         ppm         ASTM D5185m         <1	Antimony	ppm	ASTM D5185m				
ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         0           Barium         ppm         ASTM D5185m         90         53         59         0           Molybdenum         ppm         ASTM D5185m         0         0         0           Manganese         ppm         ASTM D5185m         <1	Vanadium	ppm	ASTM D5185m		0	0	0
Boron   ppm   ASTM D5185m   0   0   0   0	Cadmium	ppm	ASTM D5185m		0	0	0
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         0         0         0           Manganese         ppm         ASTM D5185m         <1	Boron	ppm	ASTM D5185m		0	0	0
Manganese         ppm         ASTM D5185m         <1         0         0           Magnesium         ppm         ASTM D5185m         90         89         86         73           Calcium         ppm         ASTM D5185m         2         2         2         <1	Barium	ppm	ASTM D5185m	90	53	59	0
Magnesium         ppm         ASTM D5185m         90         89         86         73           Calcium         ppm         ASTM D5185m         2         2         2         <1           Phosphorus         ppm         ASTM D5185m         3         0         0           Zinc         ppm         ASTM D5185m         <1         2         <1           Sulfur         ppm         ASTM D5185m         18741         20361         23212           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         0         0         0           Sodium         ppm         ASTM D5185m         8         4         7           Potassium         ppm         ASTM D5185m         >20         <1         2         2	Molybdenum	ppm	ASTM D5185m		0	0	0
Calcium         ppm         ASTM D5185m         2         2         2         <1           Phosphorus         ppm         ASTM D5185m         3         0         0         0           Zinc         ppm         ASTM D5185m         <1	Manganese	ppm	ASTM D5185m		<1	0	0
Phosphorus         ppm         ASTM D5185m         3         0         0           Zinc         ppm         ASTM D5185m         <1         2         <1           Sulfur         ppm         ASTM D5185m         18741         20361         23212           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         0         0         0           Sodium         ppm         ASTM D5185m         8         4         7           Potassium         ppm         ASTM D5185m         >20         <1	Magnesium	ppm	ASTM D5185m	90	89	86	73
Zinc         ppm         ASTM D5185m         <1         2         <1           Sulfur         ppm         ASTM D5185m         18741         20361         23212           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         0         0         0           Sodium         ppm         ASTM D5185m         8         4         7           Potassium         ppm         ASTM D5185m         >20         <1	Calcium	ppm	ASTM D5185m	2	2	2	<1
Sulfur         ppm         ASTM D5185m         18741         20361         23212           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         0         0         0           Sodium         ppm         ASTM D5185m         8         4         7           Potassium         ppm         ASTM D5185m         >20         <1	Phosphorus	ppm	ASTM D5185m		3	0	0
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         0         0         0           Sodium         ppm         ASTM D5185m         8         4         7           Potassium         ppm         ASTM D5185m         >20         <1	Zinc	ppm	ASTM D5185m		<1	2	<1
Silicon         ppm         ASTM D5185m         >25         0         0         0           Sodium         ppm         ASTM D5185m         8         4         7           Potassium         ppm         ASTM D5185m         >20         <1	Sulfur	ppm	ASTM D5185m		18741	20361	23212
Sodium         ppm         ASTM D5185m         8         4         7           Potassium         ppm         ASTM D5185m         >20         <1	CONTAMINANTS	S	method	limit/base	current	history1	history2
Potassium         ppm         ASTM D5185m         >20         <1         2         2	Silicon	ppm	ASTM D5185m	>25	0	0	0
THE TAXABLE TO THE TA	Sodium	ppm	ASTM D5185m		8	4	7
FLUID DEGRADATION method limit/base current history1 history2	Potassium	ppm	ASTM D5185m	>20	<1	2	2
	FLUID DEGRAD	ATION	method	limit/base	current	history1	history2

0.31

Acid Number (AN)

mg KOH/g ASTM D8045 0.4

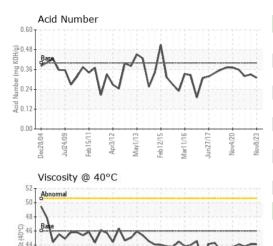
0.33

0.32



42 40

## **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	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
<b>Emulsified Water</b>	scalar	*Visual	>0.05	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERTIES		method	limit/base	current	history1	history2

cSt Visc @ 40°C ASTM D445 46 44.1 44.1 43.8

SAMPLE IMAGES

**Bottom** 

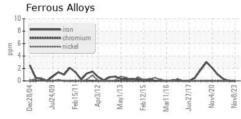
Color

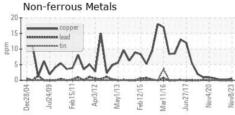


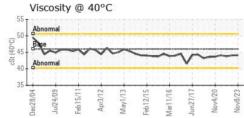


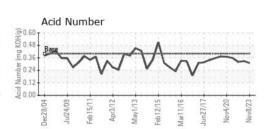














Certificate L2367

Laboratory Sample No. Lab Number **Unique Number** 

: WC0863710 : 06027831 : 10777622 Test Package : IND 2

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

: 07 Dec 2023 : 09 Dec 2023 Diagnosed Diagnostician : Don Baldridge **ELEVATED INDUSTRIAL SOLUTIONS - EIS** 

Contact/Location: DARRIN WARD - PALFOU

302 HUGHES ST FOUNTAIN INN, SC US 29644

Contact: DARRIN WARD

dward@elevatedindustrial.com

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)

F: (864)862-7653

T: