

# **OIL ANALYSIS REPORT**

Sample Rating Trend

ISO

# KAESER AIRTOWER 7.5C 5670853 (S/N 1533)

Compressor

{not provided} (--- GAL)

## **DIAGNOSIS**

#### Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. 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.

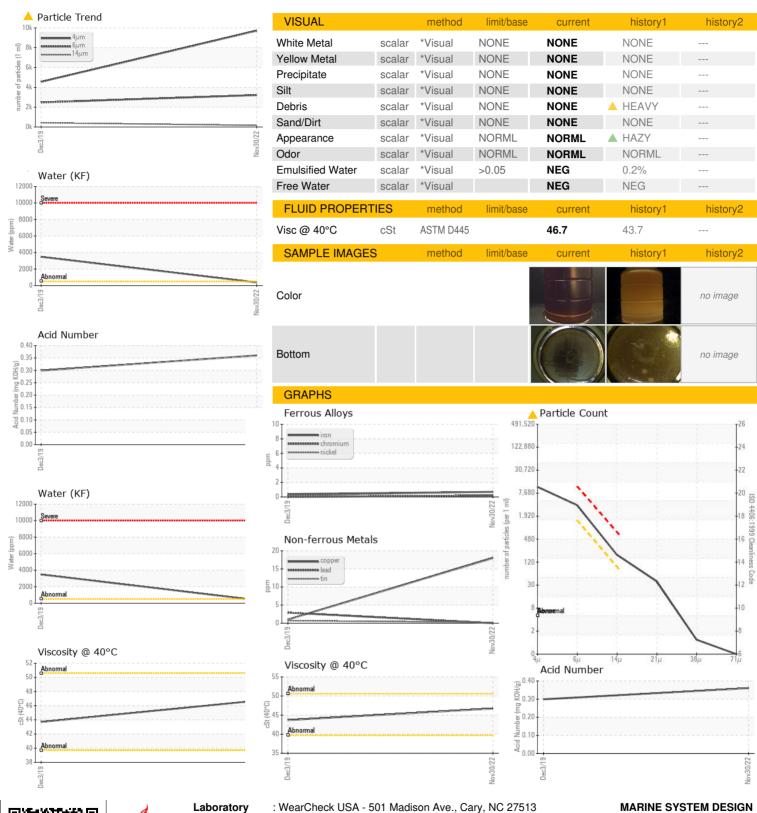
#### **Fluid Condition**

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

SAMPLE INFORMATION   method   minit/base   current   history1   history2	Sample Number Sample Date Machine Age h Oil Age h Oil Changed Sample Status		Client Info		***************************************	history1	history2
Sample Number         Client Info         KCP3365         KCP20263            Sample Date         Client Info         30 Nov 2022         03 Dec 2019            Machine Age         hrs         Client Info         1325         2000            Oil Age         hrs         Client Info         1325         2000            Oil Changed         Client Info         Changed         Changed            Sample Status         MEAR         ABNORMAL         ABNORMAL            WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         <1         <1            Chromium         ppm         ASTM D5185m         >10         <1         0            Chromium         ppm         ASTM D5185m         >3         <1         <1             Iron         ppm         ASTM D5185m         >3         0         0             Silver         ppm         ASTM D5185m         >10         0         1	Sample Number Sample Date Machine Age h Oil Age h Oil Changed Sample Status		Client Info	limit/base	current	history1	history2
Sample Date         Client Info         30 Nov 2022         03 Dec 2019            Machine Age         hrs         Client Info         4311         2985            Oil Age         hrs         Client Info         1325         2000            Oil Changed         Client Info         Changed            Sample Status         Rethod         Imit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         <1         <1            Chromium         ppm         ASTM D5185m         >10         <1         0            Nickel         ppm         ASTM D5185m         >3         <1         <1            Nickel         ppm         ASTM D5185m         >3         0         0            Silver         ppm         ASTM D5185m         >3         0         0            Lead         ppm         ASTM D5185m         >10         0         1            Aphrenium         ppm         ASTM D5185m         >10         <1         <1            Lead         ppm </th <th>Sample Date  Machine Age h Oil Age h Oil Changed Sample Status</th> <th>rs</th> <th></th> <th></th> <th></th> <th></th> <th></th>	Sample Date  Machine Age h Oil Age h Oil Changed Sample Status	rs					
Machine Age         hrs         Client Info         4311         2985            Oil Age         hrs         Client Info         1325         2000            Oil Changed         Client Info         Changed         Changed            Sample Status         BNORMAL          ABNORMAL            WEAR METALS         method         limit/base         current         history1         history2           Irranium         ppm         ASTM D5185m         >50         <1	Machine Age h Oil Age h Oil Changed Sample Status	rs	Olland		KCP53365	KCP20263	
Oil Age         hrs         Client Info         1325         2000            Oil Changed         Client Info         Changed         Changed            Sample Status         ABNORMAL         ABNORMAL            WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         <1	Oil Age h Oil Changed Sample Status	rs	Client Info		30 Nov 2022	03 Dec 2019	
Oil Changed Sample Status         Client Info         Changed ABNORMAL ABNORMAL         Changed ABNORMAL ABNORMAL            WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         <1	Oil Changed Sample Status		Client Info		4311	2985	
WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         <1	Sample Status	rs	Client Info		1325	2000	
WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         <1         <1            Chromium         ppm         ASTM D5185m         >3         <1         <1            Nickel         ppm         ASTM D5185m         >3         0         0            Titanium         ppm         ASTM D5185m         >2         0         <1            Silver         ppm         ASTM D5185m         >10         0         1            Aluminum         ppm         ASTM D5185m         >10         0         1            Aluminum         ppm         ASTM D5185m         >10         0         3            Aluminum         ppm         ASTM D5185m         >10         0         1            Lead         ppm         ASTM D5185m         >10         0         1            Copper         ppm         ASTM D5185m         0         0            Antimony         ppm         ASTM D5185m         0         0			Client Info		Changed	Changed	
Iron	WEAR METALS				ABNORMAL	ABNORMAL	
Chromium         ppm         ASTM D5185m         >10         <1			method	limit/base	current	history1	history2
Nickel         ppm         ASTM D5185m         >3         <1         <1            Titanium         ppm         ASTM D5185m         >3         0         0            Silver         ppm         ASTM D5185m         >2         0         <1	Iron p	pm	ASTM D5185m	>50	<1	<1	
Titanium         ppm         ASTM D5185m         >3         0         0            Silver         ppm         ASTM D5185m         >2         0         <1	Chromium p	pm	ASTM D5185m	>10	<1	0	
Silver	Nickel p	pm	ASTM D5185m	>3	<1	<1	
Aluminum         ppm         ASTM D5185m         >10         0         1            Lead         ppm         ASTM D5185m         >10         0         3            Copper         ppm         ASTM D5185m         >50         18         1            Tin         ppm         ASTM D5185m         >10         <1	Titanium p	pm	ASTM D5185m	>3	0	0	
Lead         ppm         ASTM D5185m         >10         0         3            Copper         ppm         ASTM D5185m         >50         18         1            Tin         ppm         ASTM D5185m         >10         <1         <1            Antimony         ppm         ASTM D5185m          0            Antimony         ppm         ASTM D5185m         0         0            Vanadium         ppm         ASTM D5185m         0         0            Vanadium         ppm         ASTM D5185m         0         <1            Cadmium         ppm         ASTM D5185m         0         <1            ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         <1            Barium         ppm         ASTM D5185m         <1         0            Molybdenum         ppm         ASTM D5185m         <1         1            Magnesium         ppm         ASTM D5185m         35 <t< td=""><td>Silver p</td><td>pm</td><td>ASTM D5185m</td><td>&gt;2</td><td>0</td><td>&lt;1</td><td></td></t<>	Silver p	pm	ASTM D5185m	>2	0	<1	
Copper         ppm         ASTM D5185m         >50         18         1            Tin         ppm         ASTM D5185m         >10         <1	Aluminum p	pm	ASTM D5185m	>10	0	1	
Tin         ppm         ASTM D5185m         >10         <1         <1            Antimony         ppm         ASTM D5185m          0            Vanadium         ppm         ASTM D5185m         0         0            Cadmium         ppm         ASTM D5185m         0         <1            ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         <1            Barium         ppm         ASTM D5185m         0         4            Barium         ppm         ASTM D5185m         0         4            Molybdenum         ppm         ASTM D5185m         <1         0            Magnesium         ppm         ASTM D5185m         <1         1            Magnesium         ppm         ASTM D5185m         0         1            Calcium         ppm         ASTM D5185m         35         3            Phosphorus         ppm         ASTM D5185m         36         5 <td>Lead p</td> <td>pm</td> <td>ASTM D5185m</td> <td>&gt;10</td> <td>0</td> <td>3</td> <td></td>	Lead p	pm	ASTM D5185m	>10	0	3	
Antimony         ppm         ASTM D5185m          0            Vanadium         ppm         ASTM D5185m         0         0            Cadmium         ppm         ASTM D5185m         0         <1            ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         <1            Barium         ppm         ASTM D5185m         0         4            Molybdenum         ppm         ASTM D5185m         <1         0            Manganese         ppm         ASTM D5185m         <1         1            Magnesium         ppm         ASTM D5185m         0         1            Calcium         ppm         ASTM D5185m         35         3            Phosphorus         ppm         ASTM D5185m         36         5            Sulfur         ppm         ASTM D5185m         23495         4278            CONTAMINANTS         method         limit/base         current         history1         his	Copper p	pm	ASTM D5185m	>50	18	1	
Vanadium         ppm         ASTM D5185m         0            Cadmium         ppm         ASTM D5185m         0         <1            ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         <1	Tin p	pm	ASTM D5185m	>10	<1	<1	
Cadmium         ppm         ASTM D5185m         0         <1            ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         <1	Antimony p	pm	ASTM D5185m			0	
ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         <1	Vanadium p	pm	ASTM D5185m		0	0	
Boron         ppm         ASTM D5185m         0         <1            Barium         ppm         ASTM D5185m         0         4            Molybdenum         ppm         ASTM D5185m         <1			ASTM D5185m		0	<1	
Barium         ppm         ASTM D5185m         0         4            Molybdenum         ppm         ASTM D5185m         <1         0            Manganese         ppm         ASTM D5185m         <1         1            Magnesium         ppm         ASTM D5185m         18         42            Calcium         ppm         ASTM D5185m         0         1            Phosphorus         ppm         ASTM D5185m         35         3            Zinc         ppm         ASTM D5185m         36         5            Sulfur         ppm         ASTM D5185m         23495         4278            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         2         <1            Sodium         ppm         ASTM D5185m         >20         <1         <1            Water         %         ASTM D6304         >0.05         0.037         △         0.348            ppm Water         ppm         ASTM D	ADDITIVES		method	limit/base	current	history1	history2
Barium         ppm         ASTM D5185m         0         4            Molybdenum         ppm         ASTM D5185m         <1	Boron p	pm	ASTM D5185m		0	<1	
Manganese         ppm         ASTM D5185m         <1         1            Magnesium         ppm         ASTM D5185m         18         42            Calcium         ppm         ASTM D5185m         0         1            Phosphorus         ppm         ASTM D5185m         35         3            Zinc         ppm         ASTM D5185m         36         5            Sulfur         ppm         ASTM D5185m         23495         4278            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         2         <1            Sodium         ppm         ASTM D5185m         5         1            Potassium         ppm         ASTM D6304         >0.05         0.037         0.348            Water         %         ASTM D6304         >500         375.7         3480            FLUID CLEANLINESS         method         limit/base         current         history1         history2			ASTM D5185m		0		
Magnesium         ppm         ASTM D5185m         18         42            Calcium         ppm         ASTM D5185m         0         1            Phosphorus         ppm         ASTM D5185m         35         3            Zinc         ppm         ASTM D5185m         36         5            Sulfur         ppm         ASTM D5185m         23495         4278            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         2         <1            Sodium         ppm         ASTM D5185m         5         1            Potassium         ppm         ASTM D6304         >0.05         0.037         0.348            Water         %         ASTM D6304         >500         375.7         3480            FLUID CLEANLINESS         method         limit/base         current         history1         history2	Molybdenum p	pm	ASTM D5185m		<1	0	
Calcium         ppm         ASTM D5185m         0         1            Phosphorus         ppm         ASTM D5185m         35         3            Zinc         ppm         ASTM D5185m         36         5            Sulfur         ppm         ASTM D5185m         23495         4278            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         2         <1	Manganese p	pm	ASTM D5185m		<1	1	
Phosphorus         ppm         ASTM D5185m         35         3            Zinc         ppm         ASTM D5185m         36         5            Sulfur         ppm         ASTM D5185m         23495         4278            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         2         <1	Magnesium p	pm	ASTM D5185m		18	42	
Zinc         ppm         ASTM D5185m         36         5            Sulfur         ppm         ASTM D5185m         23495         4278            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         2         <1	Calcium p	pm	ASTM D5185m		0	1	
Zinc         ppm         ASTM D5185m         36         5            Sulfur         ppm         ASTM D5185m         23495         4278            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         2         <1	Phosphorus p	pm	ASTM D5185m		35	3	
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         2         <1		_	ASTM D5185m		36	5	
Silicon         ppm         ASTM D5185m         >25         2         <1            Sodium         ppm         ASTM D5185m         5         1            Potassium         ppm         ASTM D5185m         >20         <1         <1            Water         %         ASTM D6304         >0.05         0.037         ▲ 0.348            ppm Water         ppm         ASTM D6304         >500         375.7         ▲ 3480            FLUID CLEANLINESS         method         limit/base         current         history1         history2	Sulfur p	pm	ASTM D5185m		23495	4278	
Sodium         ppm         ASTM D5185m         5         1            Potassium         ppm         ASTM D5185m         >20         <1         <1            Water         %         ASTM D6304         >0.05         0.037         ▲ 0.348            ppm Water         ppm         ASTM D6304         >500         375.7         ▲ 3480            FLUID CLEANLINESS         method         limit/base         current         history1         history2	CONTAMINANTS		method	limit/base	current	history1	history2
Sodium         ppm         ASTM D5185m         5         1            Potassium         ppm         ASTM D5185m         >20         <1         <1            Water         %         ASTM D6304         >0.05         0.037         ▲ 0.348            ppm Water         ppm         ASTM D6304         >500         375.7         ▲ 3480            FLUID CLEANLINESS         method         limit/base         current         history1         history2	Silicon p	pm	ASTM D5185m	>25	2	<1	
Potassium         ppm         ASTM D5185m         >20         <1         <1            Water         %         ASTM D6304         >0.05         0.037         ▲ 0.348            ppm Water         ppm         ASTM D6304         >500         375.7         ▲ 3480            FLUID CLEANLINESS         method         limit/base         current         history1         history2			ASTM D5185m		5	1	
Water         %         ASTM D6304         >0.05         0.037         ▲ 0.348            ppm Water         ppm         ASTM D6304         >500         375.7         ▲ 3480            FLUID CLEANLINESS         method         limit/base         current         history1         history2	Potassium p	pm	ASTM D5185m	>20	<1	<1	
ppm Water ppm ASTM D6304 >500 <b>375.7</b> △ 3480  FLUID CLEANLINESS method limit/base current history1 history2			ASTM D6304	>0.05	0.037	<b>△</b> 0.348	
	ppm Water p	pm	ASTM D6304	>500	375.7	<b>▲</b> 3480	
B 11 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	FLUID CLEANLINES	SS	method	limit/base	current	history1	history2
Particles >4µm ASTM D7647 <b>9714</b> 4551	Particles >4µm		ASTM D7647		9714	4551	
Particles >6µm ASTM D7647 >1300 ▲ <b>3217</b> ▲ 2479	·			>1300			
Particles >14µm ASTM D7647 >80 ▲ 163 ▲ 422							
Particles >21µm							
Particles >38μm ASTM D7647 >4 <b>1</b> △ 22							
•	Particles >71µm		ASTM D7647	>3	0	<u>2</u>	
Particles $>$ 7 µm ASIM D/64/ $>$ 3 0 $\triangle$ 2	Oil Cleanliness		ISO 4406 (c)	>/17/13	<u>^</u> 20/19/15	<u> </u>	
	FLUID DEGRADATI	ON	method	limit/base	current	history1	history2



## **OIL ANALYSIS REPORT**







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

: KCP53365 : 05710460

: 10245035

Recieved Diagnosed

: 06 Dec 2022 : 09 Dec 2022 Diagnostician : Don Baldridge

Test Package : IND 2 ( Additional Tests: KF, PrtCount ) Certificate L2367 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)

106 STATON CT GREENVILLE, NC

US 27834 Contact: PAUL

paul@marinesystemsdesign.com

T: F:

Contact/Location: PAUL ? - MARGREENNC