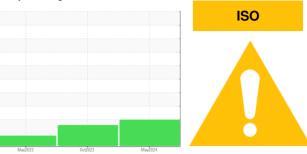


OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

KAESER 6474512

Component Compressor Fluid KAESER SIGMA (OEM) M-460 (--- GAL)

DIAGNOSIS

A Recommendation

Oil and 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

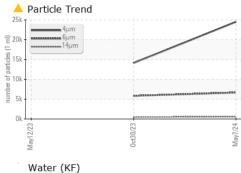
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Machine Age hrs Client Info 30503 26538 24665 Oil Age hrs Client Info 3965 0 3000 Sample Status Image Changed N/A Changed Sample Status method Imit/base current ABNORMAL ABNORMAL WEAR METALS method Imit/base current history1 history2 Iron ppm ASTM D5185n >50 0 1 0 Chromium ppm ASTM D5185n >10 0 <1 1 Nickel ppm ASTM D5185n >10 0 0 0 Silver ppm ASTM D5185n >10 0 0 0 0 Copper ppm ASTM D5185n >10 0 0 0 0 0 Copper ppm ASTM D5185n >10 0 0 0 1 0 Copper ppm ASTM D5185n 0 <th>SAMPLE INFORM</th> <th>IATION</th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 30503 26538 24665 Oil Age hrs Client Info 3965 0 3000 Oil Changed Client Info Changed ABNORMAL ABNORMAL ABNORMAL Sample Status C Imit/base current history1 history2 Iron ppm ASTM D5185m >50 0 1 0 Chromium ppm ASTM D5185m >30 0 0 <1	Sample Number		Client Info		KCPA012355	KCPA003527	KCP53627
Oil Age hrs Client Info 3965 0 3000 Oil Changed Client Info Changed N/A Changed Sample Status method limit/base current history1 ABNORMAL WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185n >50 0 1 0 Chromium ppm ASTM D5185n >3 0 <1	Sample Date		Client Info		07 May 2024	30 Oct 2023	12 May 2023
Oli Changed Client Info Changed ABNORMAL N/A Changed ABNORMAL WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 0 1 0 Chromium ppm ASTM D5185m >30 0 <1	Machine Age	hrs	Client Info		30503	26538	24665
Sample Status method Imit/base current history1 ABNORMAL WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 0 1 0 Chromium ppm ASTM D5185m >3 0 <1	Oil Age	hrs	Client Info		3965	0	3000
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 0 1 0 Chromium ppm ASTM D5185m >3 0 0 <1	Oil Changed		Client Info		Changed	N/A	Changed
Iron ppm ASTM D5185m >50 0 1 0 Nickel ppm ASTM D5185m >3 0 0 <1	Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Chromium ppm ASTM D5165m >10 0 <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m >3 0 0 <1 Titanium ppm ASTM D5185m >3 0 0 <1	Iron	ppm	ASTM D5185m	>50	0	1	0
Titanium ppm ASTM D5185m >3 0 0 <1 Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >10 <1	Chromium	ppm	ASTM D5185m	>10	0	<1	<1
Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >10 <1	Nickel	ppm	ASTM D5185m	>3	0	0	<1
Aluminum ppm ASTM D5185m >10 <1 2 <1 Lead ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >50 2 2 8 Tin ppm ASTM D5185m 50 2 2 8 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 0 Boron ppm ASTM D5185m 0 0 0 0 1 0 1 Magnaese ppm ASTM D5185m 100 88 45 10 Calcium ppm ASTM D5185m 0 0 0 3 2 Zinc ppm ASTM D5185m 0 0 0 3 2 238 Sulfur	Titanium	ppm	ASTM D5185m	>3	0	0	<1
Lead ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >50 2 2 8 Tin ppm ASTM D5185m >10 <1	Silver				0	0	0
Lead ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >50 2 2 8 Tin ppm ASTM D5185m >10 <1	Aluminum		ASTM D5185m	>10	<1	2	<1
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Molybdenum ppm ASTM D5185m 0 0 0 0 <1 Manganese ppm ASTM D5185m 100 88 45 10 Magnesium ppm ASTM D5185m 100 88 45 10 Calcium ppm ASTM D5185m 0 0 <1	Boron	ppm	ASTM D5185m	0	0	0	0
Manganese ppm ASTM D5185m <1 0 <1 Magnesium ppm ASTM D5185m 100 88 45 10 Calcium ppm ASTM D5185m 0 0 <1	Barium	ppm	ASTM D5185m	90	81	8	0
Magnesium ppm ASTM D5185m 100 88 45 10 Calcium ppm ASTM D5185m 0 0 <1	Molybdenum	ppm	ASTM D5185m	0	0	0	<1
Calcium ppm ASTM D5185m 0 1 0 <1 0 Phosphorus ppm ASTM D5185m 0 1 0 5 Zinc ppm ASTM D5185m 0 0 0 3 Sulfur ppm ASTM D5185m 23500 23190 22239 22386 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1	Manganese	ppm	ASTM D5185m		<1	0	<1
Phosphorus ppm ASTM D5185m 0 1 0 5 Zinc ppm ASTM D5185m 0 0 0 3 Sulfur ppm ASTM D5185m 23500 23190 22239 22386 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1	Magnesium	ppm	ASTM D5185m	100	88	45	10
Zinc ppm ASTM D5185m 0 0 0 3 Sulfur ppm ASTM D5185m 23500 23190 22239 22386 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1	Calcium	ppm	ASTM D5185m	0	0	<1	0
Sulfur ppm ASTM D5185m 23500 23190 22239 22386 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1 <1 <1 Sodium ppm ASTM D5185m >25 <1 <1 <1 Sodium ppm ASTM D5185m >20 3 2 <1 Potassium ppm ASTM D5185m >20 3 2 <1 Water % ASTM D5185m >20 3 2 <1 Water % ASTM D6304 >0.05 0.012 0.017 0.005 ppm Water ppm ASTM D6304 >500 127 174.0 59.7 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >1300 6682 5836 Particles >21µm ASTM D7647 >20 <	Phosphorus	ppm	ASTM D5185m	0	1	0	5
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1	Zinc	ppm	ASTM D5185m	0	0	0	3
Silicon ppm ASTM D5185m >25 <1 <1 <1 Sodium ppm ASTM D5185m 19 3 2 Potassium ppm ASTM D5185m >20 3 2 <1 Water % ASTM D6304 >0.05 0.012 0.017 0.005 ppm Water ppm ASTM D6304 >500 127 174.0 59.7 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 24513 14123 Particles >6µm ASTM D7647 >1300 6682 5836 Particles >6µm ASTM D7647 >20 157 126 Particles >14µm ASTM D7647 >20 157 126 Particles >38µm ASTM D7647 >3 1 0 Particles >71µm ASTM D7647 >3 1 0 Oil Cleanliness ISO 4406 (c) >/17/13 22/20/16 21/20/16 <td>Sulfur</td> <td>ppm</td> <td>ASTM D5185m</td> <td>23500</td> <th>23190</th> <td>22239</td> <td>22386</td>	Sulfur	ppm	ASTM D5185m	23500	23190	22239	22386
Sodium ppm ASTM D5185m 19 3 2 Potassium ppm ASTM D5185m<>20 3 2 <1	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 3 2 <1 Water % ASTM D6304 >0.05 0.012 0.017 0.005 ppm Water ppm ASTM D6304 >500 127 174.0 59.7 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 24513 14123 Particles >6µm ASTM D7647 >1300 6682 5836 Particles >14µm ASTM D7647 >80 546 495 Particles >21µm ASTM D7647 >20 157 126 Particles >38µm ASTM D7647 >3 1 0 Particles >71µm ASTM D7647 >3 1 0 Oil Cleanliness ISO 4406 (c) >/17/13 22/20/16 21/20/16 FLUID DEGRADATION method limit/base current history1 history2 <td>Silicon</td> <td>ppm</td> <td>ASTM D5185m</td> <td>>25</td> <th><1</th> <td><1</td> <td><1</td>	Silicon	ppm	ASTM D5185m	>25	<1	<1	<1
Water % ASTM D6304 >0.05 0.012 0.017 0.005 ppm Water ppm ASTM D6304 >500 127 174.0 59.7 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 24513 14123 Particles >6µm ASTM D7647 >1300 66822 5836 Particles >14µm ASTM D7647 >20 546 495 Particles >21µm ASTM D7647 >20 157 126 Particles >38µm ASTM D7647 >3 1 0 Particles >71µm ASTM D7647 >3 1 0 Oil Cleanliness ISO 4406 (c) >/17/13 22/20/16 21/20/16 FLUID DEGRADATION method limit/base current history1 history2	Sodium	ppm	ASTM D5185m		19	3	2
ppm Water ppm ASTM D6304 >500 127 174.0 59.7 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 24513 14123 Particles >6µm ASTM D7647 >1300 6682 5836 Particles >14µm ASTM D7647 >80 546 495 Particles >14µm ASTM D7647 >20 157 126 Particles >21µm ASTM D7647 >4 11 2 Particles >38µm ASTM D7647 >3 1 0 Particles >71µm ASTM D7647 >3 1 0 Oil Cleanliness ISO 4406 (c) /17/13 22/20/16 21/20/16 FLUID DEGRADATION method limit/base current history1 history2	Potassium	ppm	ASTM D5185m	>20	3	2	<1
FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 24513 14123 Particles >6µm ASTM D7647 >1300 6682 5836 Particles >6µm ASTM D7647 >80 546 495 Particles >14µm ASTM D7647 >20 157 126 Particles >21µm ASTM D7647 >4 11 2 Particles >38µm ASTM D7647 >4 11 0 Particles >71µm ASTM D7647 >3 1 0 Oil Cleanliness ISO 4406 (c) >/17/13 22/20/16 21/20/16 FLUID DEGRADATION method limit/base current history1 history2	Water	%	ASTM D6304	>0.05	0.012	0.017	0.005
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Particles >6µm ASTM D7647 >1300 ▲ 6682 ▲ 5836 Particles >14µm ASTM D7647 >80 ▲ 546 ▲ 495 Particles >21µm ASTM D7647 >20 ▲ 157 ▲ 126 Particles >38µm ASTM D7647 >4 ▲ 11 2 Particles >38µm ASTM D7647 >4 ▲ 11 2 Particles >71µm ASTM D7647 >3 1 0 Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 22/20/16 ▲ 21/20/16 FLUID DEGRADATION method limit/base current history1 history2	FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >14µm ASTM D7647 >80 ▲ 546 ▲ 495 Particles >21µm ASTM D7647 >20 ▲ 157 ▲ 126 Particles >38µm ASTM D7647 >4 ▲ 11 2 Particles >71µm ASTM D7647 >3 1 0 Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 22/20/16 ▲ 21/20/16 FLUID DEGRADATION method limit/base current history1 history2							
Particles >21μm ASTM D7647 >20 ▲ 157 ▲ 126 Particles >38μm ASTM D7647 >4 ▲ 11 2 Particles >38μm ASTM D7647 >4 ▲ 11 2 Particles >71μm ASTM D7647 >3 1 0 Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 22/20/16 ▲ 21/20/16 FLUID DEGRADATION method limit/base current history1 history2			ASTM D7647	>1300	<u> </u>	▲ 5836	
Particles >38μm ASTM D7647 >4 ▲ 11 2 Particles >71μm ASTM D7647 >3 1 0 Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 22/20/16 ▲ 21/20/16 FLUID DEGRADATION method limit/base current history1 history2			ASTM D7647	>80	546	4 95	
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Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 22/20/16 ▲ 21/20/16 FLUID DEGRADATION method limit/base current history1 history2	Particles >38µm		ASTM D7647	>4	1 1	2	
FLUID DEGRADATION method limit/base current history1 history2	Particles >71µm		ASTM D7647	>3	1	0	
	Oil Cleanliness		ISO 4406 (c)	>/17/13	A 22/20/16	2 1/20/16	
Acid Number (AN) mg KOH/g ASTM D8045 1.0 0.36 0.44 0.45	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
	Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.36	0.44	0.45

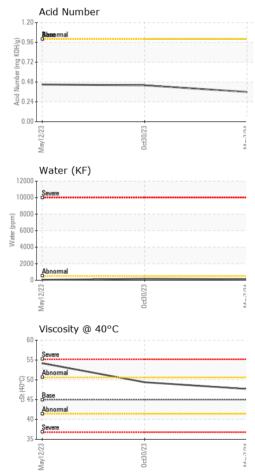
Contact/Location: Service Manager - POMDEN Page 1 of 2



OIL ANALYSIS REPORT

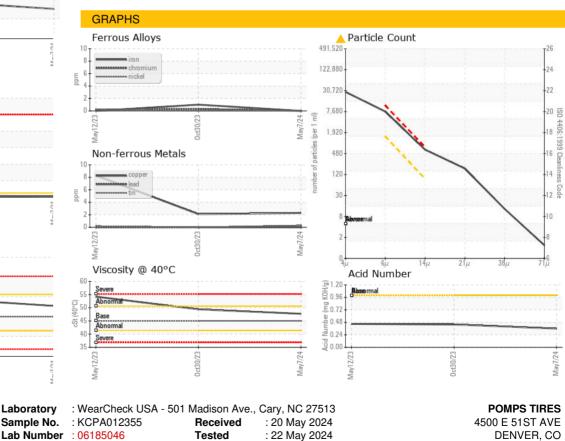








Bottom



: 22 May 2024 - Jonathan Hester

Diagnosed

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Certificate 12367

Laboratory

Sample No.

Unique Number : 11036372

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

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.

Contact/Location: Service Manager - POMDEN

US 80216

T:

F:

Contact: Service Manager