

OIL ANALYSIS REPORT

Sample Rating Trend

Machine Id

KAESER ESD 300 2551821 (S/N 1043)

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.

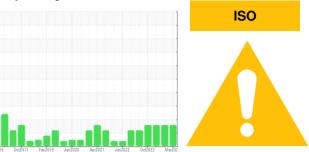
Contamination

There is a high amount of particulates present in the oil.

Fluid Condition

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

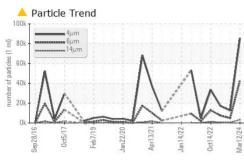
Sample Date Client Info 12 Mar 2024 20 Dec 2023 21 Sep 2023 Machine Age hrs Client Info 95704 94721 92655 Oil Age hrs Client Info 4826 0 0 Oil Changed Client Info Not Changd N/A N/A Sample Status Image Netto Client Info Not Changd N/A N/A WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 1 0 0 Nickel ppm ASTM D5185m >3 <1 0 0 Silver ppm ASTM D5185m >3 <1 0 0 Aluminum ppm ASTM D5185m >2 <1 0 0 Copper ppm ASTM D5185m >10 <1 0 0 Cadadium ppm ASTM D5185m >10 <1 0 0 Cadadi	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 95704 94721 92655 Oil Age hrs Client Info 4826 0 0 Oil Changed Client Info Not Changd N/A N/A Sample Status Imethod Imit/base current history! history! WEAR METALS method Imit/base current Nickel 0 0 Nickel ppm ASTM D5185m >50 1 0 0 Silver ppm ASTM D5185m >3 <1	Sample Number		Client Info		KCP53848	KCPA010120	KCPA001709
Oil Age Ins Client Info 4826 0 0 Oil Changed Client Info Not Changd N/A N/A Sample Status Image Limit/base current history1 history2 Iron ppm ASTM D5185m >50 1 0 0 Chromium ppm ASTM D5185m >3 <1	Sample Date		Client Info		12 Mar 2024	20 Dec 2023	21 Sep 2023
Oil Changed Client Info Not Changd ABNORMAL N/A N/A WEAR METALS method limit/base current history1 fistory2 Iron ppm ASTM D5185n >50 1 0 0 Chromium ppm ASTM D5185n >3 <1	Machine Age	hrs	Client Info		95704	94721	92655
Sample Status method Imitative ABNORMAL ABNORMAL	Oil Age	hrs	Client Info		4826	0	0
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 1 0 0 Chromium ppm ASTM D5185m >3 <1	Oil Changed		Client Info		Not Changd	N/A	N/A
Iron ppm ASTM D5185m >50 1 0 0 Nickel ppm ASTM D5185m >3 <1	Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Dromium ppm ASTM D5185m >10 <1 0 0 Nickel ppm ASTM D5185m >3 <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m >3 <1 0 0 Titanium ppm ASTM D5185m >3 <1	Iron	ppm	ASTM D5185m	>50	1	0	0
Titanium ppm ASTM D5185m >3 <1 0 0 Silver ppm ASTM D5185m >2 <1	Chromium	ppm	ASTM D5185m	>10	<1	0	0
Titanium ppm ASTM D5185m >3 <1 0 0 Silver ppm ASTM D5185m >2 <1	Nickel	ppm	ASTM D5185m	>3	<1	0	0
Silver ppm ASTM D5185m >2 <1 0 0 Aluminum ppm ASTM D5185m >10 2 0 0 Lead ppm ASTM D5185m >10 <1	Titanium		ASTM D5185m	>3	<1	0	0
Aluminum ppm ASTM D5185m >10 2 0 0 Lead ppm ASTM D5185m >10 <1	Silver		ASTM D5185m	>2	<1	0	0
Lead ppm ASTM D5185m >10 <1 0 0 Copper ppm ASTM D5185m >50 11 8 9 Tin ppm ASTM D5185m >10 <1	Aluminum		ASTM D5185m	>10	2	0	0
Copper ppm ASTM D5185m >50 11 8 9 Tin ppm ASTM D5185m >10 <1	Lead				<1	0	0
Tin ppm ASTM D5185m >10 <1 <1 0 Vanadium ppm ASTM D5185m <1					11	8	
Vanadium ppm ASTM D5185m <1 0 0 Cadmium ppm ASTM D5185m <1					<1	<1	0
Cadmium ppm ASTM D5185m <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 90 0 0 0 0 Manganese ppm ASTM D5185m 90 <1 0 0 Manganese ppm ASTM D5185m 90 <1 0 0 Galcium ppm ASTM D5185m 90 <1 0 0 Calcium ppm ASTM D5185m 0 0 4 0 Sulfur ppm ASTM D5185m 0 0 0 0 Sulfur ppm ASTM D5185m 0 0 <1 0 Sulfur ppm ASTM D5185m 22 <1 0 <1 Sodium ppm ASTM D5185m 20 1 <1 1 <td>Vanadium</td> <td></td> <td>ASTM D5185m</td> <td></td> <td></td> <td></td> <td>0</td>	Vanadium		ASTM D5185m				0
Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 90 0 0 0 Molybdenum ppm ASTM D5185m <1	Cadmium				<1		
Barium ppm ASTM D5185m 90 0 0 0 Molybdenum ppm ASTM D5185m <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m <th<< td=""><td>Boron</td><td>ppm</td><td>ASTM D5185m</td><td></td><td>0</td><td>0</td><td>0</td></th<<>	Boron	ppm	ASTM D5185m		0	0	0
Manganese ppm ASTM D5185m 0 <1 0 Magnesium ppm ASTM D5185m 90 <1	Barium	ppm	ASTM D5185m	90	0	0	0
Magnesium ppm ASTM D5185m 90 <1 0 0 Calcium ppm ASTM D5185m 2 <1	Molybdenum	ppm	ASTM D5185m		<1	0	0
Calcium ppm ASTM D5185m 2 <1 0 0 Phosphorus ppm ASTM D5185m 0 4 0 Zinc ppm ASTM D5185m 0 0 0 0 Sulfur ppm ASTM D5185m 0 0 0 0 Sulfur ppm ASTM D5185m 17616 14305 16953 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1 0 <1 Sodium ppm ASTM D5185m >20 1 <1 0 Potassium ppm ASTM D5185m >20 1 <1 1 Water % ASTM D50304 >0.05 0.012 0.008 0.006 ppm ASTM D7647 85401 12484 17194 Particles >4µm ASTM D7647 >1300 42733 4832 7455 Particles >14µm ASTM D7647 >80 3248 420 526 Particl	Manganese	ppm	ASTM D5185m		0	<1	0
Phosphorus ppm ASTM D5185m 0 4 0 Zinc ppm ASTM D5185m 0 0 0 Sulfur ppm ASTM D5185m 17616 14305 16953 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1	Magnesium	ppm	ASTM D5185m	90	<1	0	0
Zinc ppm ASTM D5185m 0 0 0 Sulfur ppm ASTM D5185m 17616 14305 16953 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1	Calcium	ppm	ASTM D5185m	2	<1	0	0
Sulfur ppm ASTM D5185m 17616 14305 16953 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1 0 <1 Sodium ppm ASTM D5185m >25 <1 0 <1 0 Potassium ppm ASTM D5185m >20 1 <1 0 <1 Water % ASTM D5185m >20 1 <1 1 Water % ASTM D5185m >20 1 <1 1 Water % ASTM D6304 >0.05 0.012 0.008 0.006 ppm Water ppm ASTM D7647 85401 12484 69.5 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >1300 42733 4832 7455 Particles >21µm ASTM D7647 20 373 <td>Phosphorus</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <td>0</td> <td>4</td> <td>0</td>	Phosphorus	ppm	ASTM D5185m		0	4	0
Sulfur ppm ASTM D5185m 17616 14305 16953 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1		ppm	ASTM D5185m		0	0	0
Silicon ppm ASTM D5185m >25 <1 0 <1 Sodium ppm ASTM D5185m 0 <1	Sulfur		ASTM D5185m		17616	14305	16953
Sodium ppm ASTM D5185m 0 <1 0 Potassium ppm ASTM D5185m >20 1 <1	CONTAMINANTS	6	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 1 <1 1 Water % ASTM D6304 >0.05 0.012 0.008 0.006 ppm ASTM D6304 >500 120 84 69.5 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >1300 42733 4832 7455 Particles >6µm ASTM D7647 >80 3248 420 526 Particles >14µm ASTM D7647 >20 373 93 96 Particles >21µm ASTM D7647 >3 0 0 0 Particles >38µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 24/23/19 21/19/16 21/20/16 FLUID DEGRADATION method limit/base current history1 history2	Silicon	ppm	ASTM D5185m	>25	<1	0	<1
Water % ASTM D6304 >0.05 0.012 0.008 0.006 ppm Water ppm ASTM D6304 >500 120 84 69.5 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 85401 12484 17194 Particles >6µm ASTM D7647 >1300 42733 4832 7455 Particles >14µm ASTM D7647 >80 3248 420 526 Particles >14µm ASTM D7647 >20 373 93 96 Particles >21µm ASTM D7647 >4 0 2 1 Particles >38µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 24/23/19 21/19/16 21/20/16 FLUID DEGRADATION method limit/base current history1 history2	Sodium	ppm	ASTM D5185m		0	<1	0
ppm Water ppm ASTM D6304 >500 120 84 69.5 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 85401 12484 17194 Particles >6µm ASTM D7647 >1300 42733 4832 7455 Particles >14µm ASTM D7647 >80 3248 420 526 Particles >21µm ASTM D7647 >20 373 93 96 Particles >38µm ASTM D7647 >4 0 2 1 Particles >71µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) /17/13 24/23/19 21/19/16 21/20/16 FLUID DEGRADATION method limit/base current history1 history2	Potassium	ppm	ASTM D5185m	>20	1	<1	1
FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 85401 12484 17194 Particles >6µm ASTM D7647 >1300 42733 4832 7455 Particles >14µm ASTM D7647 >80 3248 420 526 Particles >21µm ASTM D7647 >20 373 93 96 Particles >38µm ASTM D7647 >4 0 2 1 Particles >71µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 24/23/19 21/19/16 21/20/16	Water	%	ASTM D6304	>0.05	0.012	0.008	0.006
Particles >4µm ASTM D7647 85401 12484 17194 Particles >6µm ASTM D7647 >1300 42733 4832 7455 Particles >14µm ASTM D7647 >80 3248 420 526 Particles >21µm ASTM D7647 >20 373 93 96 Particles >38µm ASTM D7647 >4 0 2 1 Particles >71µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 24/23/19 21/19/16 21/20/16	ppm Water	ppm	ASTM D6304	>500	120	84	69.5
Particles >6µm ASTM D7647 >1300 42733 4832 7455 Particles >14µm ASTM D7647 >80 3248 420 526 Particles >21µm ASTM D7647 >20 373 93 96 Particles >38µm ASTM D7647 >4 0 2 1 Particles >38µm ASTM D7647 >3 0 0 0 Particles >71µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 24/23/19 21/19/16 21/20/16 FLUID DEGRADATION method limit/base current history1 history2	FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >14µm ASTM D7647 >80 ▲ 3248 ▲ 420 ▲ 526 Particles >21µm ASTM D7647 >20 ▲ 373 ● 93 ● 96 Particles >38µm ASTM D7647 >4 0 2 1 Particles >71µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 24/23/19 ▲ 21/19/16 ▲ 21/20/16 FLUID DEGRADATION method limit/base current history1 history2	Particles >4µm		ASTM D7647		85401	12484	17194
Particles >21μm ASTM D7647 >20 373 93 96 Particles >38μm ASTM D7647 >4 0 2 1 Particles >37µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 24/23/19 21/19/16 21/20/16 FLUID DEGRADATION method limit/base current history1 history2	Particles >6µm		ASTM D7647	>1300	<u> </u>	4832	▲ 7455
Particles >38μm ASTM D7647 >4 0 2 1 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 24/23/19 ▲ 21/19/16 ▲ 21/20/16 FLUID DEGRADATION method limit/base current history1 history2	Particles >14µm		ASTM D7647	>80	A 3248	420	<mark>▲</mark> 526
Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 ▲ 24/23/19 ▲ 21/19/16 ▲ 21/20/16 FLUID DEGRADATION method limit/base current history1 history2	Particles >21µm		ASTM D7647	>20	<u> </u>	9 3	▲ 96
Oil Cleanliness ISO 4406 (c) >/17/13 24/23/19 21/19/16 21/20/16 FLUID DEGRADATION method limit/base current history1 history2	Particles >38µm		ASTM D7647	>4	0	2	1
FLUID DEGRADATION method limit/base current history1 history2	Particles >71µm		ASTM D7647	>3	0	0	0
	Oil Cleanliness		ISO 4406 (c)	>/17/13	4/23/19	1 /19/16	1 /20/16
Acid Number (AN) mg KOH/g ASTM D8045 0.4 0.40 0.39 0.33	FLUID DEGRADA	ATION	method	limit/base	current	history1	history2
	Acid Number (AN)	mg KOH/g	ASTM D8045	0.4	0.40	0.39	0.33

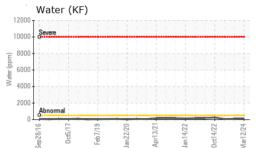


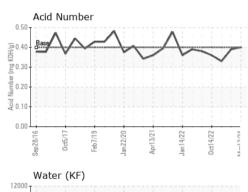
Contact/Location: ? ? - GERMON Page 1 of 2

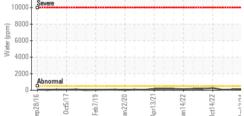


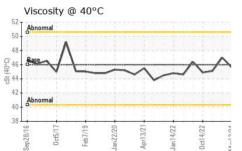
OIL ANALYSIS REPORT











VISUAL limit/base method NONE White Metal *Visual scalar Yellow Metal *Visual NONE scalar Precipitate NONE scalar *Visual Silt scalar *Visual NONE Debris *Visual scalar NONE Sand/Dirt scalar *Visual NONE NORML Appearance scalar *Visual

Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46	45.6	47.0	45.1
SAMPLE IMAGES		method	limit/base	current	history1	history2

current

NONE

NONE

NONE

NONE

NONE

NONE

NORML

Color



history1

LIGHT

NONE

NONE

NONE

NONE

NONE

NORML

history2

NONE

NONE

NONE

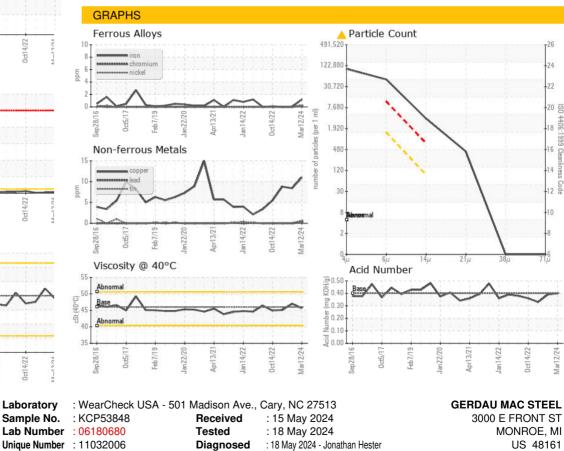
NONE

NONE

NONE

NORML

Bottom



Certificate L2367 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.

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

Report Id: GERMON [WUSCAR] 06180680 (Generated: 05/18/2024 17:30:08) Rev: 1

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Contact:

T:

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