

PROBLEM SUMMARY

Machine Id **6346071 (S/N 4560)**

Component Compressor

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

Sample Rating Trend **VIS DEBRIS**

COMPONENT CONDITION SUMMARY

No relevant graphs to display

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

PROBLEMATIC TEST RESULTS						
Sample Status				ABNORMAL		
Debris	scalar	*Visual	NONE	▲ MODER		

Customer Id: AVASCO Sample No.: KCP50120 Lab Number: 05646569 Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data: Jonathan Hester +1 919-379-4092 x4092 ihester@wearcheckusa.com

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

RECOMMENDED ACTIONS						
Action	Status	Date	Done By	Description		
Change Fluid			?	Oil and filter change at the time of sampling has been noted.		
Change Filter			?	Oil and filter change at the time of sampling has been noted.		
Alert			?	We were unable to perform a particle count due to a high concentration of particles present in this sample.		



OIL ANALYSIS REPORT

Sample Rating Trend

VIS DEBRIS

6346071 (S/N 4560)

Compressor

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

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Wear

All component wear rates are normal.

Contamination

Moderate 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 Sample Date 14 Sep 2022 Machine Age hrs 35585 Machine Age hrs 3388 Oil Age hrs 3388 Oil Age Sample Status					Sep2022		
Sample Date 14 Sep 2022 Machine Age hrs 35585 Oil Age hrs 3388 Oil Changed Sample Status method limit/base current history Iron ppm ASTM D5185m >50 0 Iron ppm ASTM D5185m >10 0 Iron ppm ASTM D5185m >10 0 Iron ppm ASTM D5185m >10 0 Nickel ppm ASTM D5185m >3 0 Silver ppm ASTM D5185m >10 0 Lead ppm ASTM D5185m >10 0 Copper ppm ASTM D5185m >10 0	SAMPLE INFORM	MATION	method	limit/base	current	history 1	history 2
Machine Age	Sample Number				KCP50120		
Oil Age	Sample Date				14 Sep 2022		
Changed Chan	Machine Age	hrs			35585		
WEAR METALS method limit/base current history Iron ppm ASTM D5185m >50 0	Oil Age	hrs			3388		
WEAR METALS method limit/base current history 1 history Iron ppm ASTM D5185m >50 0 Chromium ppm ASTM D5185m >10 0 Nickel ppm ASTM D5185m >3 0 Titanium ppm ASTM D5185m >2 0 Silver ppm ASTM D5185m >10 0 Aluminum ppm ASTM D5185m >10 0 Lead ppm ASTM D5185m >50 7 Copper ppm ASTM D5185m >50 7 Vanadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 Boron ppm ASTM D5185m 0	Oil Changed				Changed		
Iron	Sample Status				ABNORMAL		
Chromium ppm ASTM D5185m >10 0 Nickel ppm ASTM D5185m >3 0 Titanium ppm ASTM D5185m >3 0 Silver ppm ASTM D5185m >10 0 Aluminum ppm ASTM D5185m >10 0 Lead ppm ASTM D5185m >10 0 Copper ppm ASTM D5185m >10 0 Tin ppm ASTM D5185m >10 0 Vanadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history 1 history Boron ppm ASTM D5185m 0 <t< th=""><th>WEAR METALS</th><th></th><th>method</th><th>limit/base</th><th>current</th><th>history 1</th><th>history 2</th></t<>	WEAR METALS		method	limit/base	current	history 1	history 2
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 >50 7 Tin ppm ASTM D5185m 0 Vanadium ppm ASTM D5185m 0 Vanadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 Boron ppm ASTM D5185m 0 Molybdenum ppm ASTM D5185m 0	Iron	ppm	ASTM D5185m	>50	0		
Titanium	Chromium	ppm	ASTM D5185m	>10	0		
Silver	Nickel	ppm	ASTM D5185m	>3	0		
Aluminum ppm ASTM D5185m >10 0 Lead ppm ASTM D5185m >10 0 Copper ppm ASTM D5185m >50 7 Tin ppm ASTM D5185m 0 Vanadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history 1 history Boron ppm ASTM D5185m 0 Barium ppm ASTM D5185m 0 Molybdenum ppm ASTM D5185m 0 Magnesium ppm ASTM D5185m 0 Magnesium ppm ASTM D5185m 1 Phosphorus ppm ASTM D5185m 0 <td>Titanium</td> <td>ppm</td> <td>ASTM D5185m</td> <td>>3</td> <td>0</td> <td></td> <td></td>	Titanium	ppm	ASTM D5185m	>3	0		
Lead ppm ASTM D5185m >10 0 Copper ppm ASTM D5185m >50 7 Tin ppm ASTM D5185m >10 0 Vanadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history 1 history Boron ppm ASTM D5185m 0 Barium ppm ASTM D5185m 0 Molybdenum ppm ASTM D5185m 0 Manganese ppm ASTM D5185m 0 Magnesium ppm ASTM D5185m 2 0 Calcium ppm ASTM D5185m 1 Phosphorus ppm ASTM D5185m <td>Silver</td> <td>ppm</td> <td>ASTM D5185m</td> <td>>2</td> <td>0</td> <td></td> <td></td>	Silver	ppm	ASTM D5185m	>2	0		
Copper ppm ASTM D5185m >50 7 Tin ppm ASTM D5185m >10 0 Vanadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 Boron ppm ASTM D5185m 0 Barium ppm ASTM D5185m 90 0 Molybdenum ppm ASTM D5185m 0 Magnesium ppm ASTM D5185m 0 Calcium ppm ASTM D5185m 2 0 Phosphorus ppm ASTM D5185m 1 Sulfur ppm ASTM D5185m 0 Sulfur ppm	Aluminum	ppm	ASTM D5185m	>10	0		
Tin	Lead	ppm	ASTM D5185m	>10	0		
Vanadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history 1 history Boron ppm ASTM D5185m 0 Barium ppm ASTM D5185m 90 0 Molybdenum ppm ASTM D5185m 0 Manganese ppm ASTM D5185m 0 Magnesium ppm ASTM D5185m 90 0 Calcium ppm ASTM D5185m 2 0 Phosphorus ppm ASTM D5185m 1 Zinc ppm ASTM D5185m 0 Sulfur ppm ASTM D5185m 25 <1	Copper	ppm	ASTM D5185m	>50	7		
Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history 1 history Boron ppm ASTM D5185m 0 Barium ppm ASTM D5185m 90 0 Molybdenum ppm ASTM D5185m 0 Manganese ppm ASTM D5185m 0 Magnesium ppm ASTM D5185m 2 0 Calcium ppm ASTM D5185m 2 0 Phosphorus ppm ASTM D5185m 0 Sulfur ppm ASTM D5185m 13607 CONTAMINANTS method limit/base current history 1 history Silicon ppm ASTM D5185m >25 <1	Tin	ppm	ASTM D5185m	>10	0		
ADDITIVES method limit/base current history 1 history Boron ppm ASTM D5185m 0 Barium ppm ASTM D5185m 90 0 Molybdenum ppm ASTM D5185m 0 Manganese ppm ASTM D5185m 0 Magnesium ppm ASTM D5185m 2 0 Calcium ppm ASTM D5185m 2 0 Phosphorus ppm ASTM D5185m 1 Zinc ppm ASTM D5185m 0 Sulfur ppm ASTM D5185m 13607 CONTAMINANTS method limit/base current history 1 history Sodium ppm ASTM D5185m >25 <1	Vanadium	ppm	ASTM D5185m		0		
Boron ppm ASTM D5185m 0	Cadmium	ppm	ASTM D5185m		0		
Barium ppm ASTM D5185m 90 0 Molybdenum ppm ASTM D5185m 0 Manganese ppm ASTM D5185m 0 Magnesium ppm ASTM D5185m 2 0 Calcium ppm ASTM D5185m 1 Phosphorus ppm ASTM D5185m 0 Zinc ppm ASTM D5185m 0 Sulfur ppm ASTM D5185m 13607 CONTAMINANTS method limit/base current history 1 history Silicon ppm ASTM D5185m >25 <1 Sodium ppm ASTM D5185m >20 0 Potassium ppm ASTM D6304 >0.05 0.012 Water <td< th=""><th>ADDITIVES</th><th></th><th>method</th><th>limit/base</th><th>current</th><th>history 1</th><th>history 2</th></td<>	ADDITIVES		method	limit/base	current	history 1	history 2
Molybdenum ppm ASTM D5185m 0 Manganese ppm ASTM D5185m 0 Magnesium ppm ASTM D5185m 90 0 Calcium ppm ASTM D5185m 2 0 Phosphorus ppm ASTM D5185m 1 Zinc ppm ASTM D5185m 0 Sulfur ppm ASTM D5185m 13607 CONTAMINANTS method limit/base current history history Silicon ppm ASTM D5185m >25 <1 Sodium ppm ASTM D5185m >20 0 Potassium ppm ASTM D6304 >0.05 0.012 Water % ASTM D6304 >500 129.0 FL	Boron	ppm	ASTM D5185m		0		
Manganese ppm ASTM D5185m 0 Magnesium ppm ASTM D5185m 90 0 Calcium ppm ASTM D5185m 2 0 Phosphorus ppm ASTM D5185m 1 Zinc ppm ASTM D5185m 0 Sulfur ppm ASTM D5185m 13607 CONTAMINANTS method limit/base current history 1 history Silicon ppm ASTM D5185m >25 <1	Barium	ppm	ASTM D5185m	90	0		
Magnesium ppm ASTM D5185m 90 0 Calcium ppm ASTM D5185m 2 0 Phosphorus ppm ASTM D5185m 1 Zinc ppm ASTM D5185m 0 Sulfur ppm ASTM D5185m 13607 CONTAMINANTS method limit/base current history 1 history Silicon ppm ASTM D5185m >25 <1 Sodium ppm ASTM D5185m >20 0 Potassium ppm ASTM D5185m >20 0 Water % ASTM D6304 >0.05 0.012 FLUID DEGRADATION method limit/base current history history	Molybdenum	ppm	ASTM D5185m		0		
Calcium ppm ASTM D5185m 2 0 Phosphorus ppm ASTM D5185m 1 Zinc ppm ASTM D5185m 0 Sulfur ppm ASTM D5185m 13607 CONTAMINANTS method limit/base current history 1 history Silicon ppm ASTM D5185m >25 <1	Manganese	ppm	ASTM D5185m		0		
Phosphorus ppm ASTM D5185m 1 Zinc ppm ASTM D5185m 0 Sulfur ppm ASTM D5185m 13607 CONTAMINANTS method limit/base current history 1 history Silicon ppm ASTM D5185m >25 <1 Sodium ppm ASTM D5185m 0 Potassium ppm ASTM D5185m >20 0 Water % ASTM D6304 >0.05 0.012 FLUID DEGRADATION method limit/base current history history	Magnesium	ppm	ASTM D5185m	90	0		
Zinc ppm ASTM D5185m 0 Sulfur ppm ASTM D5185m 13607 CONTAMINANTS method limit/base current history 1 Silicon ppm ASTM D5185m >25 <1 Sodium ppm ASTM D5185m 0 Potassium ppm ASTM D5185m >20 0 Water % ASTM D6304 >0.05 0.012 ppm Water ppm ASTM D6304 >500 129.0 FLUID DEGRADATION method limit/base current history history	Calcium	ppm	ASTM D5185m	2	0		
Sulfur ppm ASTM D5185m 13607 CONTAMINANTS method limit/base current history 1 Silicon ppm ASTM D5185m >25 <1	Phosphorus	ppm	ASTM D5185m		1		
CONTAMINANTS method limit/base current history 1 history Silicon ppm ASTM D5185m >25 <1	Zinc	ppm	ASTM D5185m		0		
Silicon ppm ASTM D5185m >25 <1 Sodium ppm ASTM D5185m 0 Potassium ppm ASTM D5185m >20 0 Water % ASTM D6304 >0.05 0.012 ppm Water ppm ASTM D6304 >500 129.0 FLUID DEGRADATION method limit/base current history history	Sulfur	ppm	ASTM D5185m		13607		
Sodium ppm ASTM D5185m 0 Potassium ppm ASTM D5185m >20 0 Water % ASTM D6304 >0.05 0.012 ppm Water ppm ASTM D6304 >500 129.0 FLUID DEGRADATION method limit/base current history 1 history	CONTAMINANTS	3	method	limit/base	current	history 1	history 2
Potassium ppm ASTM D5185m >20 0 Water % ASTM D6304 >0.05 0.012 ppm Water ppm ASTM D6304 >500 129.0 FLUID DEGRADATION method limit/base current history 1	Silicon	ppm	ASTM D5185m	>25	<1		
Water % ASTM D6304 >0.05 0.012 ppm Water ppm ASTM D6304 >500 129.0 FLUID DEGRADATION method limit/base current history 1	Sodium	ppm	ASTM D5185m		0		
ppm Water ppm ASTM D6304 >500 129.0 FLUID DEGRADATION method limit/base current history 1 history	Potassium	ppm	ASTM D5185m	>20	0		
FLUID DEGRADATION method limit/base current history 1 history	Water	%	ASTM D6304	>0.05	0.012		
	ppm Water	ppm	ASTM D6304	>500	129.0		
Acid Number (AN) mg KOH/g ASTM D8045 0.4 0.42	FLUID DEGRADA	ATION	method	limit/base	current	history 1	history 2
	Acid Number (AN)	mg KOH/g	ASTM D8045	0.4	0.42		



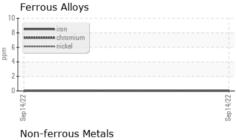
OIL ANALYSIS REPORT

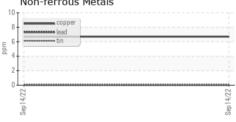


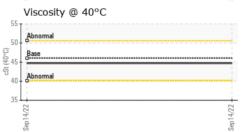
VISUAL		method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	NONE		
Yellow Metal	scalar	*Visual	NONE	NONE		
Precipitate	scalar	*Visual	NONE	NONE		
Silt	scalar	*Visual	NONE	NONE		
Debris	scalar	*Visual	NONE	MODER		
Sand/Dirt	scalar	*Visual	NONE	NONE		
Appearance	scalar	*Visual	NORML	NORML		
Odor	scalar	*Visual	NORML	NORML		
Emulsified Water	scalar	*Visual	>0.05	NEG		
Free Water	scalar	*Visual		NEG		
FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 40°C	cSt	ASTM D445	46	44.7		
SAMPLE IMAGES		method	limit/base	current	history 1	history 2

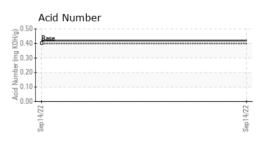
Color		no image	no image
Bottom		no image	no image
ODADUO			

GRAPHS













Laboratory Sample No. Lab Number Unique Number : 10141108

: KCP50120 : 05646569

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

: 20 Sep 2022 Diagnosed : 21 Sep 2022 Diagnostician : Jonathan Hester

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)

AVANS MACHINE & TOOL

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USA 35768

Contact: Service Manager

T: F: