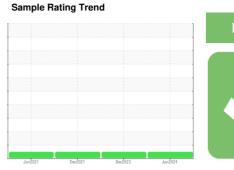


OIL ANALYSIS REPORT

KAESER S-460 **KAESER 1003 - INDUSTRIAL HARD CHROME**

Component





Recommendation

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

Moderate concentration of visible dirt/debris present in the oil.

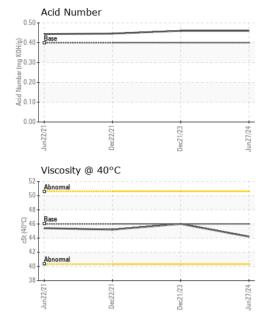
Fluid Condition

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

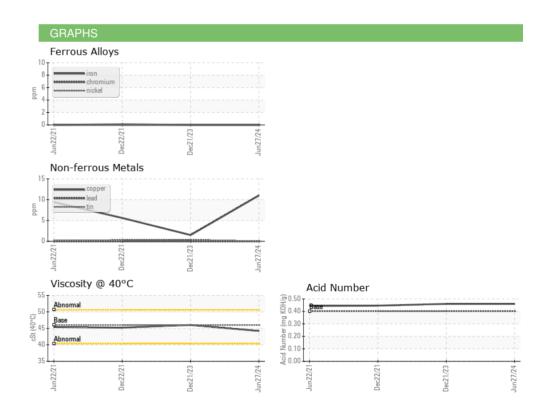
Sample Number Client Info UDI0000254 UCH06048981 UCH0654 Sample Date Client Info 27 Jun 2024 21 Dec 2023 22 Dec 2 Machine Age hrs Client Info 161156 158062 96609 96000 310 65000							
Sample Date	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 161156 158062 96609 Oil Age hrs Client Info 3400 310 6000 Oil Changed Client Info Not Changed Not Changed Not Changed Sample Status NORMAL NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history1 Water WC Method >0.05 NEG NEG NEG WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >50 0 0 <1	Sample Number		Client Info			UCH06048981	UCH05435528
Oil Age	Sample Date		Client Info		27 Jun 2024	21 Dec 2023	22 Dec 2021
Oil Changed Client Info Not Changed Not Changed NORMAL NORMAL	∕lachine Age	hrs	Client Info		161156	158062	96609
NORMAL NORMAL NORMAL NORMAL NORMAL	Oil Age	hrs	Client Info		3400	310	6000
CONTAMINATION method limit/base current history1 history1 Water WC Method >0.05 NEG NEG NEG WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >50 0 0 <1	Oil Changed		Client Info		Not Changd	Changed	Not Changd
Water WC Method >0.05 NEG NEG NEG WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >50 0 0 <1	Sample Status				NORMAL	NORMAL	NORMAL
Iron	CONTAMINATION	J	method	limit/base	current	history1	history2
Iron	Vater		WC Method	>0.05	NEG	NEG	NEG
Chromium ppm ASTM D5185m >10 0 0 0 Nickel ppm ASTM D5185m >3 0 0 0 Titanium ppm ASTM D5185m >3 0 0 0 Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >10 0 0 0 Lead ppm ASTM D5185m >50 11 2 6 Copper ppm ASTM D5185m >50 11 2 6 Tin ppm ASTM D5185m >10 0 <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m >3 0 0 0 Titanium ppm ASTM D5185m >3 0 0 0 Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >10 0 0 <1	ron	ppm	ASTM D5185m	>50	0	0	<1
Titanium	Chromium	ppm	ASTM D5185m	>10	0	0	0
Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >10 0 0 <1	Nickel	ppm	ASTM D5185m	>3	0	0	0
Aluminum ppm ASTM D5185m >10 0 0 <1 Lead ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >50 11 2 6 Tin ppm ASTM D5185m >10 0 <1	Titanium	ppm	ASTM D5185m	>3	0	0	0
Lead ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >50 11 2 6 Tin ppm ASTM D5185m >10 0 <1 <1 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 history1 Boron ppm ASTM D5185m 0 0 0 Boron ppm ASTM D5185m 0 0 0 Barium ppm ASTM D5185m 0 0 0 Male appm ASTM D5185m 0 0 0 Male appm ASTM D5185m 0 1 1 1 Calcium ppm ASTM D5185m <td>Silver</td> <td>ppm</td> <td>ASTM D5185m</td> <td>>2</td> <th>0</th> <td>0</td> <td>0</td>	Silver	ppm	ASTM D5185m	>2	0	0	0
Copper ppm ASTM D5185m >50 11 2 6 Tin ppm ASTM D5185m >10 0 <1	Aluminum	ppm	ASTM D5185m	>10	0	0	<1
Tin ppm ASTM D5185m >10 0 <1 <1 Antimony ppm ASTM D5185m 0 Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history1 Barium ppm ASTM D5185m 0 0 0 Barium ppm ASTM D5185m 90 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 0 1 0 0 Magnesium ppm ASTM D5185m 2 0 1 0 Phosphorus ppm ASTM D5185m 0 0 0 0 Sulfur ppm ASTM D5185m 0 0 0 0 CONTAMINANTS method <td>ead</td> <td>ppm</td> <td>ASTM D5185m</td> <td>>10</td> <th>0</th> <td>0</td> <td>0</td>	ead	ppm	ASTM D5185m	>10	0	0	0
Antimony ppm ASTM D5185m 0 Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 0 0 0 Barium ppm ASTM D5185m 90 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Manganese ppm ASTM D5185m 0 <1	Copper	ppm	ASTM D5185m	>50	11	2	6
Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 0 0 12 Barium ppm ASTM D5185m 90 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Manganese ppm ASTM D5185m 0 <1	Tin	ppm	ASTM D5185m	>10	0	<1	<1
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 0 0 12 Barium ppm ASTM D5185m 90 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Manganese ppm ASTM D5185m 0 <1	Antimony	ppm	ASTM D5185m				0
ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 0 0 12 Barium ppm ASTM D5185m 90 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Manganese ppm ASTM D5185m 0 <1	/anadium	ppm	ASTM D5185m		0	0	0
Boron ppm ASTM D5185m 0 0 12 Barium ppm ASTM D5185m 90 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 Manganese ppm ASTM D5185m 0 <1 0 Magnesium ppm ASTM D5185m 90 1 <1 1 Calcium ppm ASTM D5185m 2 0 1 0 Phosphorus ppm ASTM D5185m 0 <1 8 Zinc ppm ASTM D5185m 0 0 0 Sulfur ppm ASTM D5185m 17294 13505 16594 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >25 0 0 <1 Sodium ppm ASTM D5185m 1 1 <1 <1	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 90 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 Manganese ppm ASTM D5185m 0 <1 0 Magnesium ppm ASTM D5185m 90 1 <1 1 Calcium ppm ASTM D5185m 2 0 1 0 Phosphorus ppm ASTM D5185m 0 <1 8 Zinc ppm ASTM D5185m 0 0 0 Sulfur ppm ASTM D5185m 17294 13505 16594 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >25 0 0 <1 Sodium ppm ASTM D5185m 1 1 <1 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 0 0 0 Manganese ppm ASTM D5185m 0 <1 0 Magnesium ppm ASTM D5185m 90 1 <1 1 Calcium ppm ASTM D5185m 2 0 1 0 Phosphorus ppm ASTM D5185m 0 <1 8 Zinc ppm ASTM D5185m 0 0 0 Sulfur ppm ASTM D5185m 17294 13505 16594 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >25 0 0 <1 Sodium ppm ASTM D5185m 1 1 <1 <1	Boron	ppm	ASTM D5185m		0	0	12
Manganese ppm ASTM D5185m 0 <1 0 Magnesium ppm ASTM D5185m 90 1 <1	Barium	ppm	ASTM D5185m	90	0	0	0
Magnesium ppm ASTM D5185m 90 1 <1 1 Calcium ppm ASTM D5185m 2 0 1 0 Phosphorus ppm ASTM D5185m 0 <1 8 Zinc ppm ASTM D5185m 0 0 0 Sulfur ppm ASTM D5185m 17294 13505 16594 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >25 0 0 <1 Sodium ppm ASTM D5185m 1 1 <1	/lolybdenum	ppm	ASTM D5185m		0	0	0
Calcium ppm ASTM D5185m 2 0 1 0 Phosphorus ppm ASTM D5185m 0 <1	<i>M</i> anganese	ppm	ASTM D5185m		0	<1	0
Phosphorus ppm ASTM D5185m 0 <1 8 Zinc ppm ASTM D5185m 0 0 0 0 Sulfur ppm ASTM D5185m 17294 13505 16594 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >25 0 0 <1 Sodium ppm ASTM D5185m 1 1 <1	∕lagnesium	ppm	ASTM D5185m	90	1	<1	1
Zinc ppm ASTM D5185m 0 0 0 0 Sulfur ppm ASTM D5185m 17294 13505 16594 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >25 0 0 <1 Sodium ppm ASTM D5185m 1 1 <1	Calcium	ppm	ASTM D5185m	2	0	1	0
Sulfur ppm ASTM D5185m 17294 13505 16594 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >25 0 0 <1 Sodium ppm ASTM D5185m 1 1 <1	hosphorus	ppm	ASTM D5185m		0	<1	8
CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >25 0 0 <1	′ inc	ppm	ASTM D5185m		0	0	0
Silicon ppm ASTM D5185m >25 0 0 <1 Sodium ppm ASTM D5185m 1 1 <1 <1	Sulfur	ppm	ASTM D5185m		17294	13505	16594
Sodium ppm ASTM D5185m 1 1 <1	CONTAMINANTS		method	limit/base	current	history1	history2
Plant	Silicon	ppm	ASTM D5185m	>25	0	0	<1
	Sodium	ppm	ASTM D5185m		1	1	<1
Potassium ppm ASTM D5185m >20 0 0 0	otassium	ppm	ASTM D5185m	>20	0	0	0
FLUID DEGRADATION method limit/base current history1 history1	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g ASTM D8045 0.4 0.46 0.46 0.446	Acid Number (AN)	mg KOH/g	ASTM D8045	0.4	0.46	0.46	0.446



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	MODER	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	TIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46	44.2	46.0	45.2
SAMPLE IMAGES	S	method	limit/base	current	history1	history2
Color						







Laboratory Sample No.

: UDI0000254 Lab Number : 06239216 Unique Number : 11128050

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 17 Jul 2024

Tested : 18 Jul 2024 Diagnosed : 19 Jul 2024 - Sean Felton

2201 CURTISS STREET DOWNERS GROVE, IL

DELTA INDUSTRIES - DOWNERS GROVE

US 60515

Contact: MICHAEL FERRIS

Test Package : IND 2 Certificate 12367 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)

Bottom

F: (630)960-3931