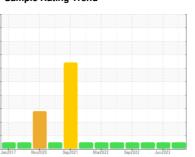


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

KAESER 4098280 - ROCHLING AUTOMOTIVE (S/N 1045)

Component

Compressor Fluid

KAESER SIGMA (OEM) S-460 (8 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil

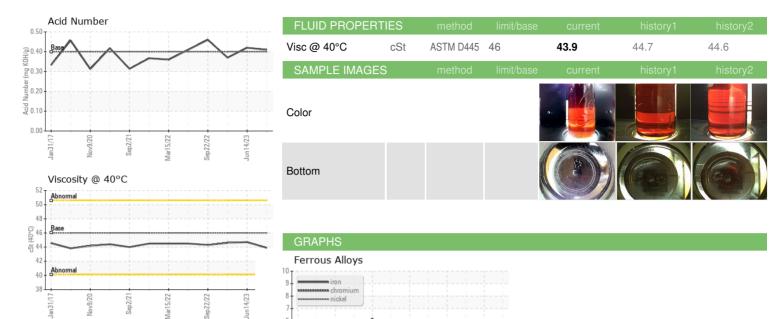
Fluid Condition

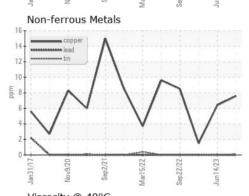
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

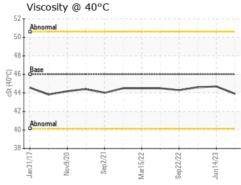
Sample Date			Jan2017	Nov2020 Sep2021	Mar2022 Sep2022 Ju	in2023	
Sample Date Client Info 28 Sep 2023 14 Jun 2023 23 Mar 2023 Machine Age hrs Client Info 0 72370 70380 Oil Age hrs Client Info 0 61219 2075 Oil Changed Client Info N/A N/A N/A Sample Status NORMAL NORMAL NORMAL WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 0 0 <1	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 0 72370 70380 Oil Age hrs Client Info 0 61219 2075 Oil Changed Client Info N/A N/A N/A N/A Sample Status method Imitibase current history1 history2 Iron ppm ASTM D5185m >50 0 0 <1 Chromium ppm ASTM D5185m >50 0 0 0 Chromium ppm ASTM D5185m >10 0 0 0 Nickel ppm ASTM D5185m >3 <1 0 0 0 Alluminum ppm ASTM D5185m >10 2 0 0 0 0 Alluminum ppm ASTM D5185m >10 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 <th>Sample Number</th> <th></th> <th>Client Info</th> <th></th> <th>WC0845134</th> <th>WC0825946</th> <th>WC0758245</th>	Sample Number		Client Info		WC0845134	WC0825946	WC0758245
Oil Age hrs Client Info N/A N/A N/A N/A Sample Status Normal NORMAL NORMAL NORMAL NORMAL WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 0 0 <1	Sample Date		Client Info		28 Sep 2023	14 Jun 2023	23 Mar 2023
Oil Changed Client Info N/A N/A NORMAL NORMAL	Machine Age	hrs	Client Info		0	72370	70380
NORMAL NORMAL NORMAL NORMAL	Oil Age	hrs	Client Info		0	61219	2075
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 0 0 <1 Chromium ppm ASTM D5185m >10 0 0 0 Nickel ppm ASTM D5185m >3 <1 0 0 Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >10 2 0 0 Aluminum ppm ASTM D5185m >10 2 0 0 Lead ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >50 8 6 2 Tin ppm ASTM D5185m >10 <1 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 <th>Oil Changed</th> <th></th> <th>Client Info</th> <th></th> <th>N/A</th> <th>N/A</th> <th>N/A</th>	Oil Changed		Client Info		N/A	N/A	N/A
Irron	Sample Status				NORMAL	NORMAL	NORMAL
Chromium ppm ASTM D5185m >10 0 0 0 Nickel ppm ASTM D5185m >3 0 0 0 Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >10 2 0 0 Lead ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >50 8 6 2 Tin ppm ASTM D5185m >10 <1 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 Boron ppm ASTM D5185m 90 0 2 <1 Molybdenum ppm ASTM D5185m 0 0 0 0	WEAR METALS		method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m >3 0 0 0 Titanium ppm ASTM D5185m >3 <1 0 0 Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >10 2 0 0 Lead ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >50 8 6 2 Tin ppm ASTM D5185m 0 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 0 0 0 0 Malpidenum ppm ASTM D5185m 0 0 0 0	Iron	ppm	ASTM D5185m	>50	0	0	<1
Titanium	Chromium	ppm	ASTM D5185m	>10	0	0	0
Silver	Nickel	ppm	ASTM D5185m	>3	0	0	0
Aluminum ppm ASTM D5185m >10 2 0 0 Lead ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >50 8 6 2 Tin ppm ASTM D5185m >10 <1 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 90 0 2 <1 0 Molybdenum ppm ASTM D5185m 0 0 0 0 0 Magnesium ppm ASTM D5185m 0 0 <1 21 Calcium ppm ASTM D5185m 0 0	Titanium	ppm	ASTM D5185m	>3	<1	0	0
Lead	Silver	ppm	ASTM D5185m	>2	0	0	0
Copper ppm ASTM D5185m >50 8 6 2 Tin ppm ASTM D5185m >10 <1 0 0 Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 Boron ppm ASTM D5185m 0 0 0 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 Manganese ppm ASTM D5185m 0 0 0 Magnesium ppm ASTM D5185m 90 0 <1 21 Calcium ppm ASTM D5185m 0 0 <1 21 Phosphorus ppm ASTM D5185m 0 0 <1 21 Sulfur ppm ASTM D5185m 0 0	Aluminum	ppm	ASTM D5185m	>10	2	0	0
Tin	Lead	ppm	ASTM D5185m	>10	0	0	0
Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 90 0 2 <1	Copper	ppm	ASTM D5185m	>50	8	6	2
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 Barium ppm ASTM D5185m 90 0 2 <1 Molybdenum ppm ASTM D5185m 0 0 0 0 Manganese ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 90 0 <1 21 Calcium ppm ASTM D5185m 2 0 0 <1 Phosphorus ppm ASTM D5185m 0 0 <1 2 Sulfur ppm ASTM D5185m 0 0 2 2 Sulfur ppm ASTM D5185m 25 <1 0 0 Scilicon ppm ASTM D5185m >25 <1 0 7 <t< th=""><th>Tin</th><th>ppm</th><th>ASTM D5185m</th><th>>10</th><th><1</th><th>0</th><th>0</th></t<>	Tin	ppm	ASTM D5185m	>10	<1	0	0
ADDITIVES	Vanadium	ppm	ASTM D5185m		0	0	0
Boron	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 90 0 2 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 0 0 0 Manganese ppm ASTM D5185m 90 0 <1	Boron	ppm	ASTM D5185m		0	0	0
Manganese ppm ASTM D5185m 0 0 0 Magnesium ppm ASTM D5185m 90 0 <1 21 Calcium ppm ASTM D5185m 2 0 0 <1 Phosphorus ppm ASTM D5185m 0 0 <1 Zinc ppm ASTM D5185m 0 0 2 Sulfur ppm ASTM D5185m 14024 14954 17437 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1 0 0 Sodium ppm ASTM D5185m >20 0 <1 2 FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg KOH/g ASTM D8045 0.4 0.41 0.42 0.37 VISUAL method limit/base current history1 history2	Barium	ppm	ASTM D5185m	90	0	2	<1
Magnesium ppm ASTM D5185m 90 0 <1	Molybdenum	ppm	ASTM D5185m		0	0	0
Calcium ppm ASTM D5185m 2 0 0 <1	Manganese	ppm	ASTM D5185m		0	0	0
Phosphorus ppm ASTM D5185m 0 0 <1	Magnesium	ppm	ASTM D5185m	90	0	<1	21
Zinc ppm ASTM D5185m 0 0 2 Sulfur ppm ASTM D5185m 14024 14954 17437 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1 0 0 Sodium ppm ASTM D5185m >20 0 <1 2 Potassium ppm ASTM D5185m >20 0 <1 2 FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg KOH/g ASTM D8045 0.4 0.41 0.42 0.37 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE NONE	Calcium	ppm	ASTM D5185m	2	0	0	<1
Sulfur ppm ASTM D5185m 14024 14954 17437 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1 0 0 Sodium ppm ASTM D5185m 1 0 7 Potassium ppm ASTM D5185m >20 0 <1 2 FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg KOH/g ASTM D8045 0.4 0.41 0.42 0.37 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE	Phosphorus		ASTM D5185m		0	0	<1
Sulfur ppm ASTM D5185m 14024 14954 17437 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1							

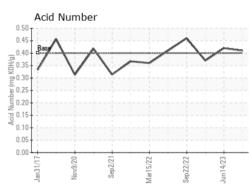


OIL ANALYSIS REPORT











Certificate L2367

Laboratory Sample No. Lab Number **Unique Number** Test Package : IND 2

: WC0845134 : 05964742 : 10671293

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 29 Sep 2023 Diagnosed

: 02 Oct 2023 Diagnostician : Don Baldridge **ELEVATED INDUSTRIAL SOLUTIONS - EIS**

302 HUGHES ST FOUNTAIN INN, SC US 29644

Contact: DARRIN WARD

dward@elevatedindustrial.com T:

F: (864)862-7653

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: PALFOU [WUSCAR] 05964742 (Generated: 10/02/2023 12:09:22) Rev: 1

Submitted By: DARRIN WARD