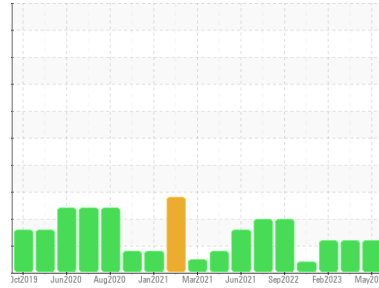


PROBLEM SUMMARY

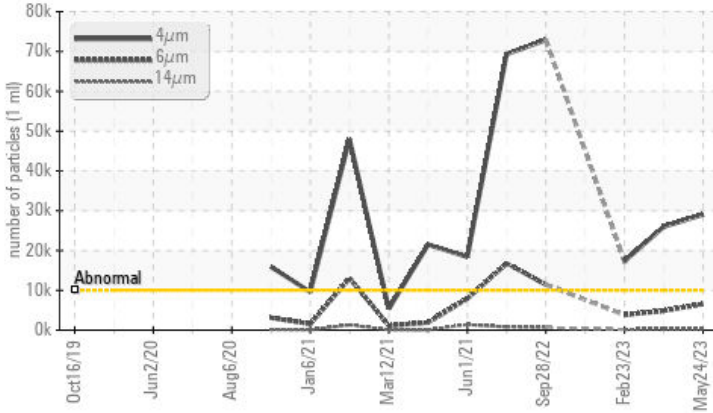
Sample Rating Trend



Machine Id
BOSS ROSS DRAW 3031-HEATER TREATER-XTO (S/N 120968)
 Component
Compressor
 Fluid
TULCO LUBSOIL LPG WS 150 (18 GAL)

COMPONENT CONDITION SUMMARY

▲ Particle Trend



RECOMMENDATION

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status			ABNORMAL	ABNORMAL	ABNORMAL
Particles >4µm	ASTM D7647	>10000	▲ 29013	▲ 25984	▲ 17338
Particles >6µm	ASTM D7647	>1300	▲ 6529	▲ 4864	▲ 3838
Oil Cleanliness	ISO 4406 (c)	>20/17/15	▲ 22/20/15	▲ 22/19/15	▲ 21/19/14

Customer Id: RICHOB
 Sample No.: TO90003375
 Lab Number: 05867342
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Doug Bogart +1 (800)237-1369 x4016
dougb@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 Filter	MISSED	Dec 01 2023	?	We recommend you service the filters on this component if applicable.

HISTORICAL DIAGNOSIS

11 Apr 2023 Diag: Don Baldrige

ISO



We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



23 Feb 2023 Diag: Don Baldrige

ISO



We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



06 Dec 2022 Diag: Don Baldrige

VIS DEBRIS



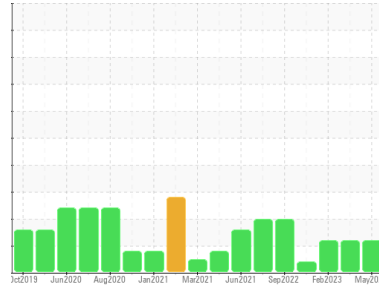
No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample. All component wear rates are normal. Moderate concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id
BOSS ROSS DRAW 3031-HEATER TREATER-XTO (S/N 120968)
 Component
Compressor
 Fluid
TULCO LUBSOIL LPG WS 150 (18 GAL)

DIAGNOSIS

Recommendation
 We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.

Wear
 All component wear rates are normal.

Contamination
 There is a high amount of silt (particulates < 14 microns in size) 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 INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			TO90003375	TO90002810	TO90002912
Sample Date	Client Info			24 May 2023	11 Apr 2023	23 Feb 2023
Machine Age	hrs Client Info			13609	13609	13609
Oil Age	hrs Client Info			0	0	0
Oil Changed	Client Info			N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	<1	<1	<1
Chromium	ppm	ASTM D5185m	>10	0	0	0
Nickel	ppm	ASTM D5185m		<1	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	0	0	0
Lead	ppm	ASTM D5185m	>25	0	0	0
Copper	ppm	ASTM D5185m	>50	<1	1	<1
Tin	ppm	ASTM D5185m	>15	1	<1	<1
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	0	0	0	0
Molybdenum	ppm	ASTM D5185m	0	0	0	0
Manganese	ppm	ASTM D5185m		<1	0	0
Magnesium	ppm	ASTM D5185m	0	1	0	<1
Calcium	ppm	ASTM D5185m	0	0	<1	<1
Phosphorus	ppm	ASTM D5185m	0	252	229	225
Zinc	ppm	ASTM D5185m	0	0	0	<1
Sulfur	ppm	ASTM D5185m	0	543	316	400

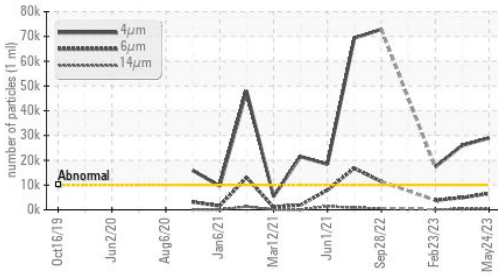
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<1	<1	<1
Sodium	ppm	ASTM D5185m		8	12	11
Potassium	ppm	ASTM D5185m	>20	2	1	1
Water	%	ASTM D6304	>2.26	0.406	0.371	0.424
ppm Water	ppm	ASTM D6304	>22600	4060	3710	4240

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	▲ 29013	▲ 25984	▲ 17338
Particles >6µm		ASTM D7647	>1300	▲ 6529	▲ 4864	▲ 3838
Particles >14µm		ASTM D7647	>320	284	308	140
Particles >21µm		ASTM D7647	>80	56	63	18
Particles >38µm		ASTM D7647	>20	3	3	1
Particles >71µm		ASTM D7647	>4	0	0	0
Oil Cleanliness		ISO 4406 (c)	>20/17/15	▲ 22/20/15	▲ 22/19/15	▲ 21/19/14

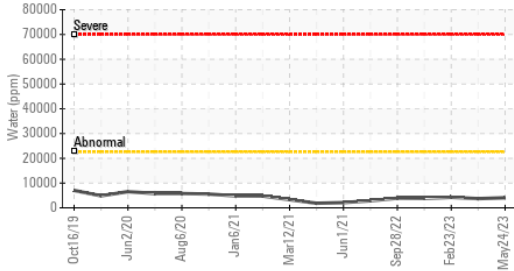
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.10	0.15	0.13

OIL ANALYSIS REPORT

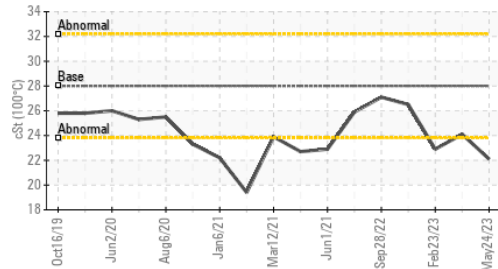
Particle Trend



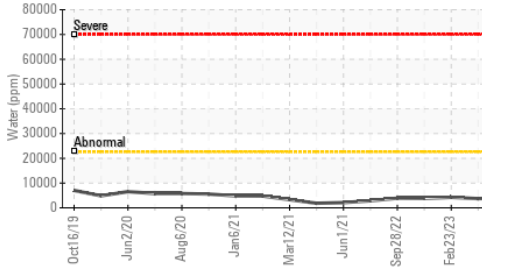
Water (KF)



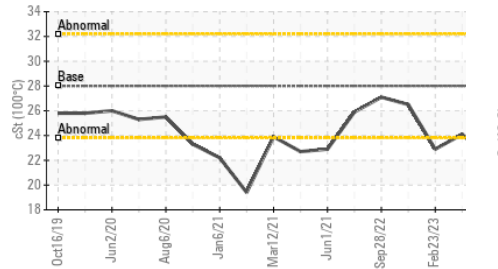
Viscosity @ 100°C



Water (KF)



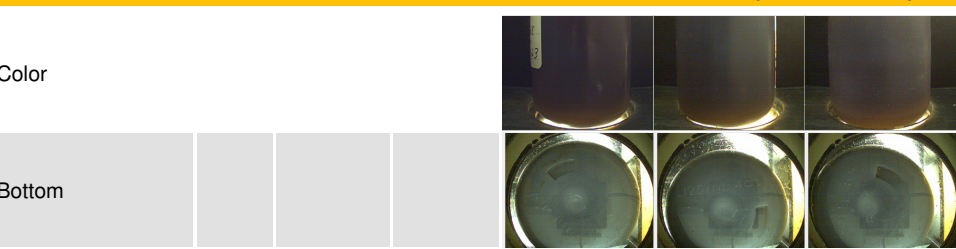
Viscosity @ 100°C



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>2.26	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

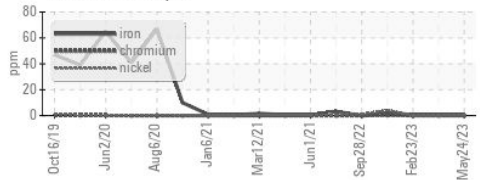
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	151	130	121
Visc @ 100°C	cSt	ASTM D445	28	24.1	22.9
Viscosity Index (VI)	Scale	ASTM D2270	224	218	220

SAMPLE IMAGES

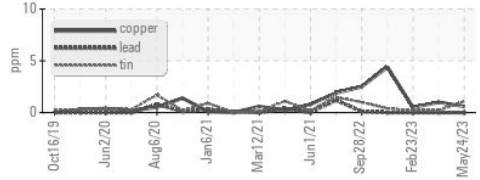


GRAPHS

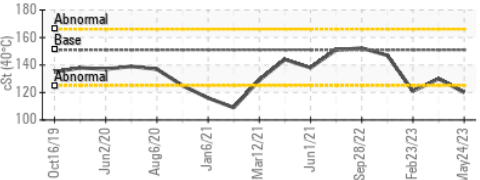
Ferrous Alloys



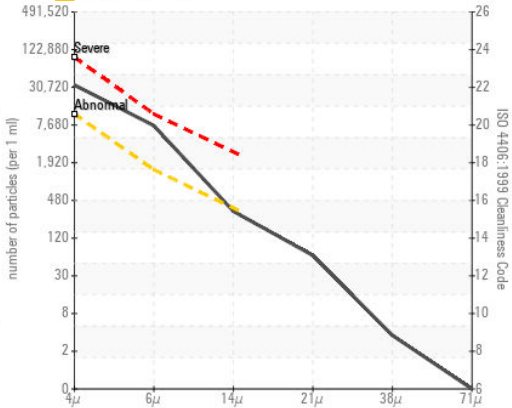
Non-ferrous Metals



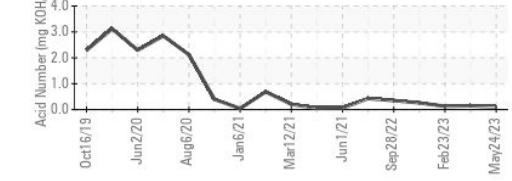
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO90003375 **Received** : 07 Jun 2023
Lab Number : 05867342 **Diagnosed** : 10 Jun 2023
Unique Number : 10507126 **Diagnostician** : Doug Bogart
Test Package : IND 2 (Additional Tests: KF, KV100, PrtCount, VI)

RICHARDS ENERGY COMPRESSION
 1629 WEST BENDER
 HOBBS, NM
 US 88240
 Contact: BILL RICHARDSON
 richardsenergy@windstream.net

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)