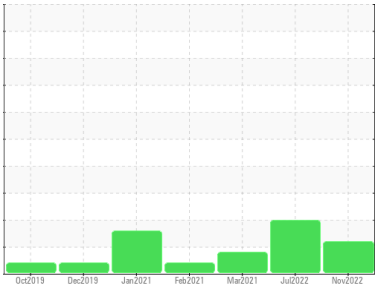
PROBLEM SUMMARY

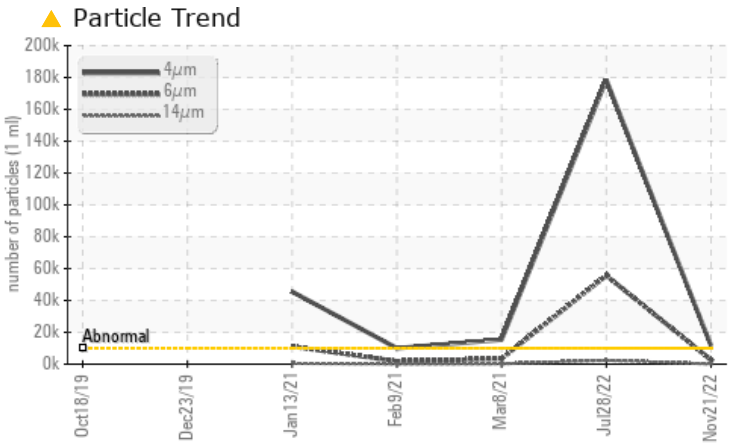
Sample Rating Trend



ISO

Machine Id
BOSS ARES 4 CTB-EOG (S/N 115378)
Component
Compressor
Fluid
TULCO LUBSOIL LPG WS 150 (10 GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	ABNORMAL	ATTENTION
Particles >4µm		ASTM D7647	>10000	▲ **11598**	▲ 178564	▲ 15347
Particles >6µm		ASTM D7647	>1300	▲ **2651**	▲ 55612	▲ 3423
Oil Cleanliness		ISO 4406 (c)	>20/17/15	▲ **21/19/14**	▲ 25/23/18	▲ 21/19/15

Customer Id: RICHOB
Sample No.: TO90002715
Lab Number: 05748008
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Don Baldridge +1
don.b505@comcast.net

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

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

28 Jul 2022 Diag: Doug Bogart

ISO

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.All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

08 Mar 2021 Diag: Doug Bogart

ISO

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.All component wear rates are normal. There is a moderate 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

09 Feb 2021 Diag: Don Baldridge

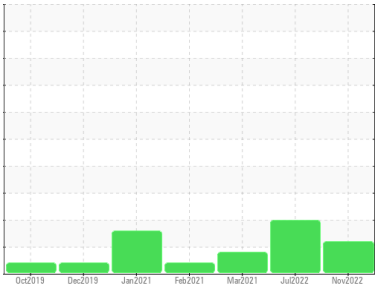
ISO

No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal. There is a moderate 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

OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Machine Id
BOSS ARES 4 CTB-EOG (S/N 115378)
Component
Compressor
Fluid
TULCO LUBSOIL LPG WS 150 (10 GAL)

DIAGNOSIS

Recommendation
The oil 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 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		**TO90002715**	TO90002551	TO90001306
Sample Date		Client Info		**21 Nov 2022**	28 Jul 2022	08 Mar 2021
Machine Age	hrs	Client Info		**19066**	15937	5832
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**Changed**	N/A	N/A
Sample Status				**ABNORMAL**	ABNORMAL	ATTENTION

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	**1**	1	0
Chromium	ppm	ASTM D5185m	>10	**<1**	0	0
Nickel	ppm	ASTM D5185m		**4**	<1	<1
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**<1**	0	<1
Aluminum	ppm	ASTM D5185m	>25	**<1**	<1	0
Lead	ppm	ASTM D5185m	>25	**0**	1	0
Copper	ppm	ASTM D5185m	>50	**<1**	<1	<1
Tin	ppm	ASTM D5185m	>15	**<1**	2	<1
Antimony	ppm	ASTM D5185m		**---**	---	0
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**<1**	0	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**0**	5	2
Barium	ppm	ASTM D5185m	0	**<1**	0	0
Molybdenum	ppm	ASTM D5185m	0	**0**	<1	0
Manganese	ppm	ASTM D5185m		**<1**	0	0
Magnesium	ppm	ASTM D5185m	0	**<1**	<1	0
Calcium	ppm	ASTM D5185m	0	**4**	3	0
Phosphorus	ppm	ASTM D5185m	0	**67**	333	12
Zinc	ppm	ASTM D5185m	0	**2**	<1	0
Sulfur	ppm	ASTM D5185m	0	**56**	68	0

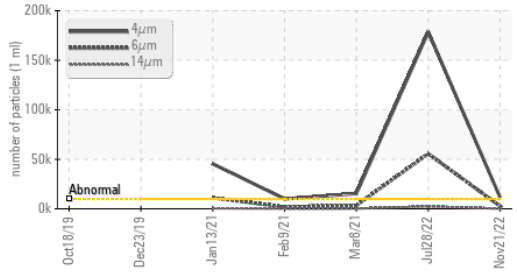
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**<1**	<1	1
Sodium	ppm	ASTM D5185m		**13**	27	7
Potassium	ppm	ASTM D5185m	>20	**<1**	2	<1
Water	%	ASTM D6304	>2.26	**0.469**	0.723	0.572
ppm Water	ppm	ASTM D6304	>22600	**4690**	7230	5720

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	▲ **11598**	▲ 178564	▲ 15347
Particles >6µm		ASTM D7647	>1300	▲ **2651**	▲ 55612	▲ 3423
Particles >14µm		ASTM D7647	>320	**107**	▲ 2384	197
Particles >21µm		ASTM D7647	>80	**17**	▲ 266	44
Particles >38µm		ASTM D7647	>20	**1**	13	3
Particles >71µm		ASTM D7647	>4	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>20/17/15	▲ **21/19/14**	▲ 25/23/18	▲ 21/19/15

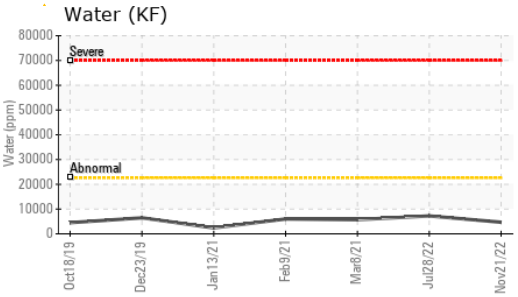
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.068**	0.26	0.03

OIL ANALYSIS REPORT

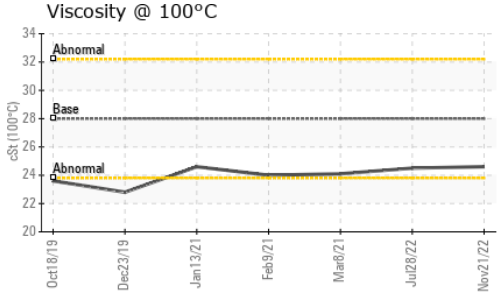
Particle Trend



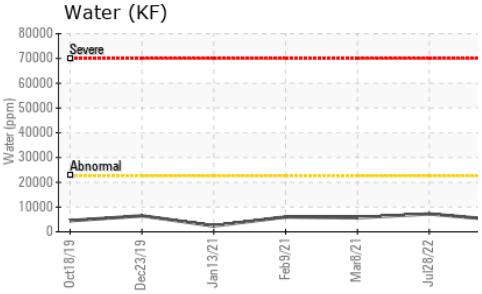
Water (KF)



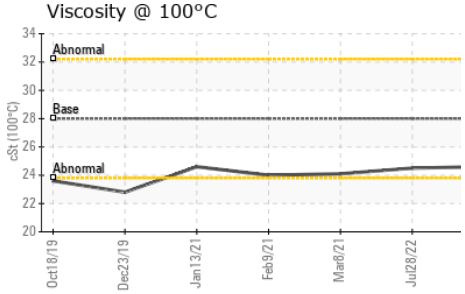
Viscosity @ 100°C



Water (KF)



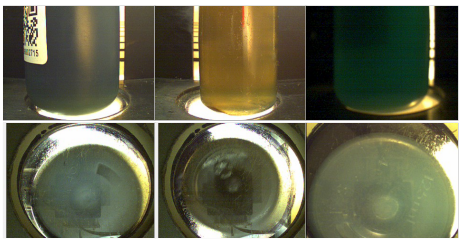
Viscosity @ 100°C



VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	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	**VLITE**	LIGHT	LIGHT
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	>2.26	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

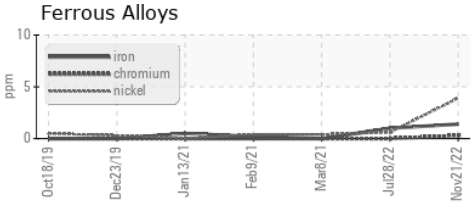
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	151	**132**	141	132
Visc @ 100°C	cSt	ASTM D445	28	**24.6**	24.5	24.1
Viscosity Index (VI)	Scale	ASTM D2270	224	**220**	207	215

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

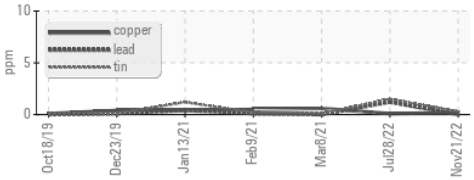


GRAPHS

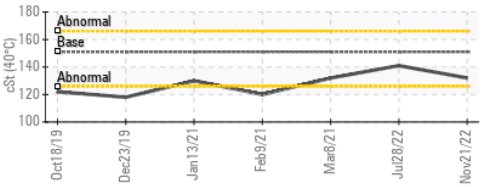
Ferrous Alloys



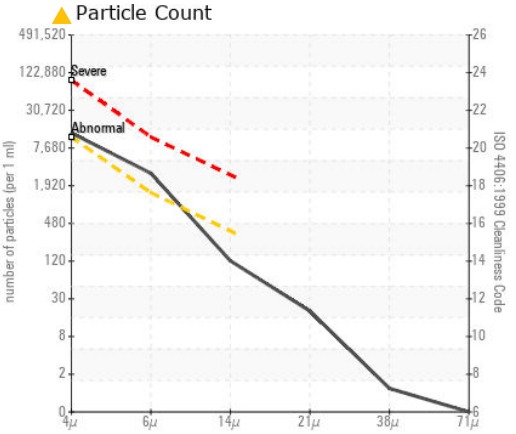
Non-ferrous Metals



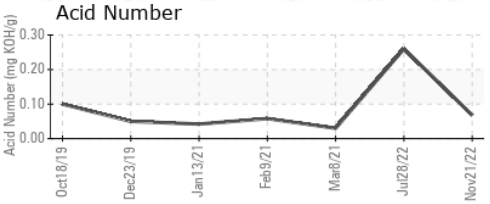
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO90002715 **Received** : 24 Jan 2023
Lab Number : 05748008 **Diagnosed** : 26 Jan 2023
Unique Number : 10307612 **Diagnostician** : Don Baldridge
Test Package : IND 2 (Additional Tests: KF, KV100, PrtCount, VI)

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)

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