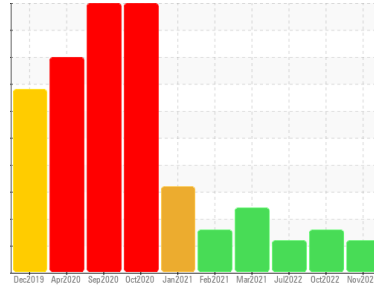


PROBLEM SUMMARY

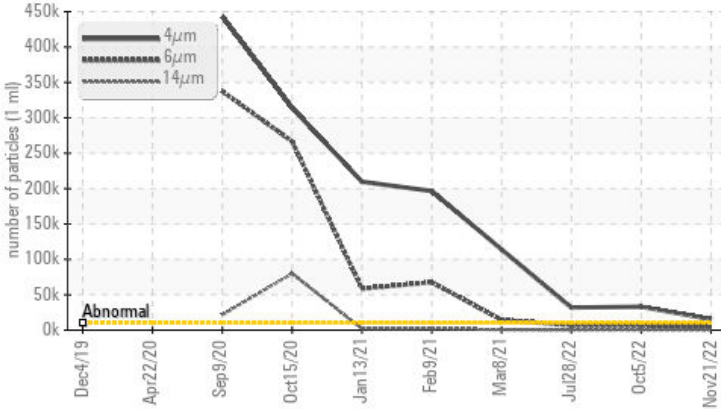
Sample Rating Trend



Machine Id
BOSS DRILL ISLAND 4 (S/N 117618)
 Component
Compressor
 Fluid
TULCO LUBSOIL LPG WS 150 (10 GAL)

COMPONENT CONDITION SUMMARY

▲ Particle Trend



RECOMMENDATION

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.

PROBLEMATIC TEST RESULTS

Sample Status			ABNORMAL	ABNORMAL	ABNORMAL
Particles >4µm	ASTM D7647	>10000	▲ 15412	▲ 33083	▲ 31807
Particles >6µm	ASTM D7647	>1300	▲ 4220	▲ 6883	▲ 6865
Oil Cleanliness	ISO 4406 (c)	>20/17/15	▲ 21/19/14	▲ 22/20/16	▲ 22/20/15

Customer Id: RICHOB
 Sample No.: TO90002716
 Lab Number: 05747966
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Don Baldrige +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

05 Oct 2022 Diag: Jonathan Hester

ISO



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



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 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



08 Mar 2021 Diag: Doug Bogart

WEAR

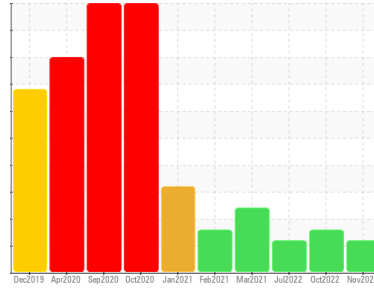


We recommend you service the filters on this component. Resample at the next service interval to monitor. The iron level is abnormal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



Machine Id
BOSS DRILL ISLAND 4 (S/N 117618)
 Component
Compressor
 Fluid
TULCO LUBSOIL LPG WS 150 (10 GAL)



DIAGNOSIS

Recommendation
 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.

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 acceptable for the time in service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	TO90002716	TO90002618	TO90002552
Sample Date	Client Info	21 Nov 2022	05 Oct 2022	28 Jul 2022
Machine Age	hrs	20692	19847	15937
Oil Age	hrs	20692	19847	0
Oil Changed	Client Info	Filtered	Filtered	N/A
Sample Status		ABNORMAL	ABNORMAL	ABNORMAL

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >50	13	5	16
Chromium	ppm	ASTM D5185m >10	<1	0	0
Nickel	ppm	ASTM D5185m	5	1	<1
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m	<1	0	<1
Aluminum	ppm	ASTM D5185m >25	<1	0	<1
Lead	ppm	ASTM D5185m >25	0	0	1
Copper	ppm	ASTM D5185m >50	<1	0	<1
Tin	ppm	ASTM D5185m >15	<1	<1	2
Antimony	ppm	ASTM D5185m	---	---	---
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	0	7
Barium	ppm	ASTM D5185m 0	<1	0	0
Molybdenum	ppm	ASTM D5185m 0	0	0	<1
Manganese	ppm	ASTM D5185m	2	<1	1
Magnesium	ppm	ASTM D5185m 0	1	0	<1
Calcium	ppm	ASTM D5185m 0	4	0	2
Phosphorus	ppm	ASTM D5185m 0	213	191	311
Zinc	ppm	ASTM D5185m 0	206	143	200
Sulfur	ppm	ASTM D5185m 0	137	128	85

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >25	<1	0	<1
Sodium	ppm	ASTM D5185m	33	10	16
Potassium	ppm	ASTM D5185m >20	2	<1	2
Water	%	ASTM D6304 >2.26	0.389	0.285	0.834
ppm Water	ppm	ASTM D6304 >22600	3890	2850	8340

FLUID CLEANLINESS

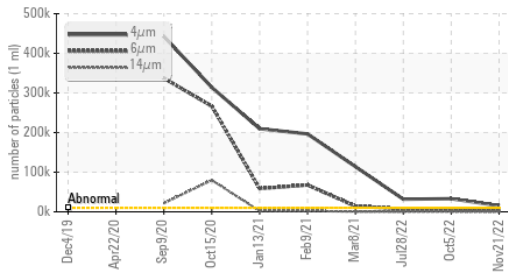
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >10000	▲ 15412	▲ 33083	▲ 31807
Particles >6µm	ASTM D7647 >1300	▲ 4220	▲ 6883	▲ 6865
Particles >14µm	ASTM D7647 >320	143	▲ 360	270
Particles >21µm	ASTM D7647 >80	18	52	32
Particles >38µm	ASTM D7647 >20	1	1	2
Particles >71µm	ASTM D7647 >4	0	0	0
Oil Cleanliness	ISO 4406 (c) >20/17/15	▲ 21/19/14	▲ 22/20/16	▲ 22/20/15

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	0.35	0.36	0.82

OIL ANALYSIS REPORT

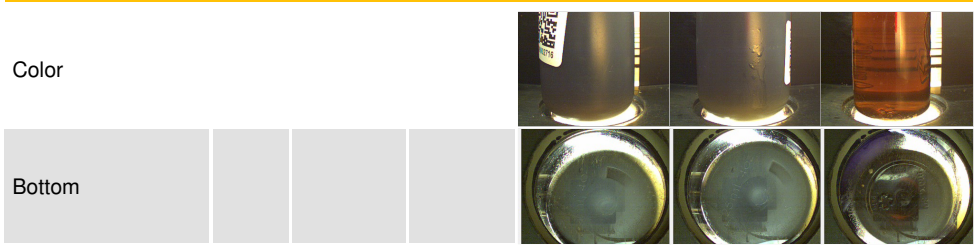
Particle Trend



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	NONE	NONE
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	144	141
Visc @ 100°C	cSt	ASTM D445	28	25.8	24.4
Viscosity Index (VI)	Scale	ASTM D2270	224	215	206

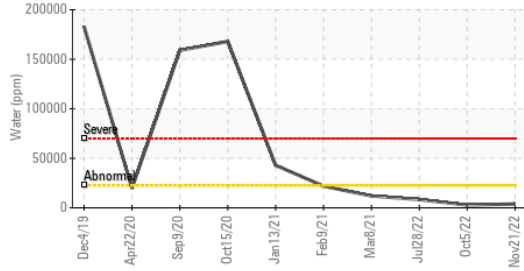
SAMPLE IMAGES



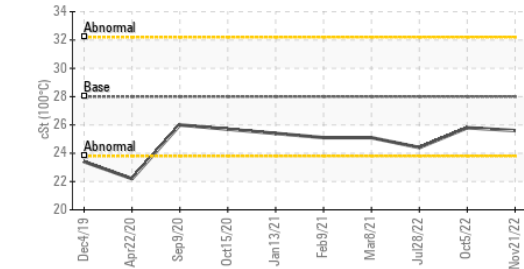
Color

Bottom

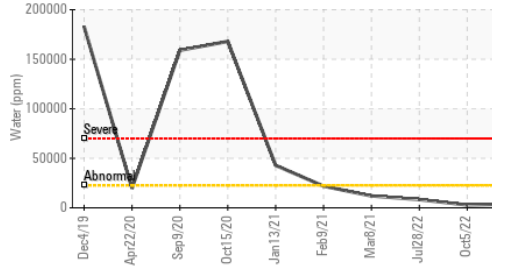
Water (KF)



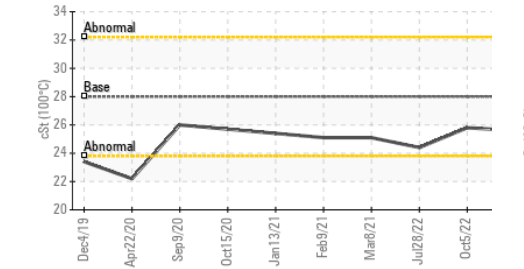
Viscosity @ 100°C



Water (KF)

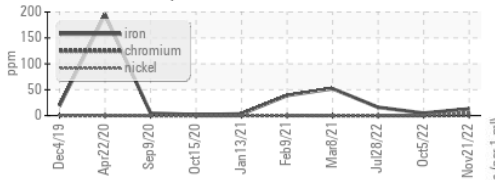


Viscosity @ 100°C

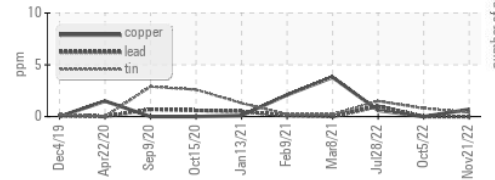


GRAPHS

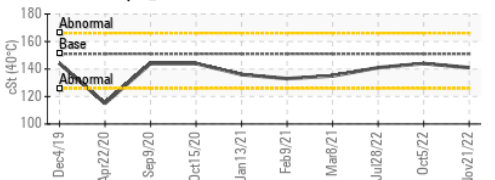
Ferrous Alloys



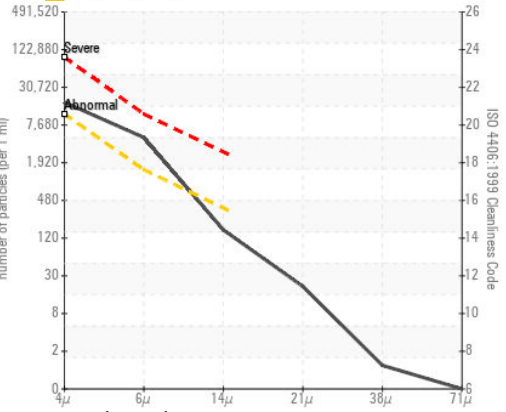
Non-ferrous Metals



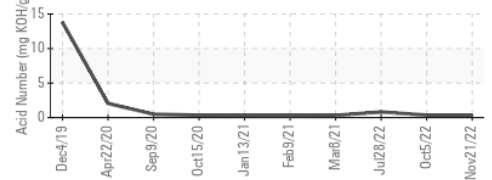
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO90002716 **Received** : 24 Jan 2023
Lab Number : 05747966 **Diagnosed** : 26 Jan 2023
Unique Number : 10307570 **Diagnostician** : Don Baldrige
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)

T:
F: