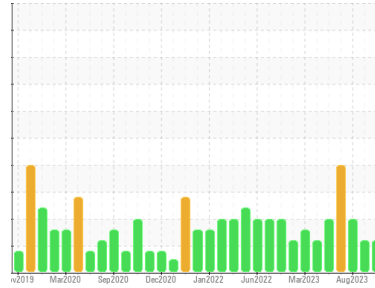




Machine Id  
**VILTER VILTER**

Component  
**Screw Compressor**

Fluid  
**TULCO LUBSOIL LPG WI 100 (150 GAL)**



## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. 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	<b>TO60000932</b>	TO60000938	TO60000936
Sample Date	Client Info	<b>10 Jan 2024</b>	11 Dec 2023	03 Aug 2023
Machine Age	wks Client Info	<b>0</b>	0	0
Oil Age	wks Client Info	<b>0</b>	0	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >60	<b>1</b>	4	4
Chromium	ppm ASTM D5185m >4	<b>&lt;1</b>	<1	<1
Nickel	ppm ASTM D5185m	<b>0</b>	<1	0
Titanium	ppm ASTM D5185m	<b>&lt;1</b>	0	<1
Silver	ppm ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >5	<b>0</b>	1	<1
Lead	ppm ASTM D5185m >10	<b>0</b>	0	0
Copper	ppm ASTM D5185m >30	<b>0</b>	0	<1
Tin	ppm ASTM D5185m >15	<b>1</b>	<1	<1
Vanadium	ppm ASTM D5185m	<b>&lt;1</b>	0	<1
Cadmium	ppm ASTM D5185m	<b>&lt;1</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>0</b>	0	0
Barium	ppm ASTM D5185m	<b>0</b>	10	0
Molybdenum	ppm ASTM D5185m 0	<b>0</b>	0	0
Manganese	ppm ASTM D5185m	<b>&lt;1</b>	0	<1
Magnesium	ppm ASTM D5185m 0	<b>0</b>	<1	2
Calcium	ppm ASTM D5185m	<b>0</b>	<1	0
Phosphorus	ppm ASTM D5185m 0	<b>2</b>	5	3
Zinc	ppm ASTM D5185m 0	<b>0</b>	0	0
Sulfur	ppm ASTM D5185m 0	<b>793</b>	1351	2111

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >50	<b>20</b>	31	43
Sodium	ppm ASTM D5185m	<b>0</b>	0	0
Potassium	ppm ASTM D5185m >20	<b>&lt;1</b>	1	2
Water	% ASTM D6304 >2.26	<b>0.185</b>	0.262	1.127
ppm Water	ppm ASTM D6304 >22600	<b>1859</b>	2626	11274.1

## FLUID CLEANLINESS

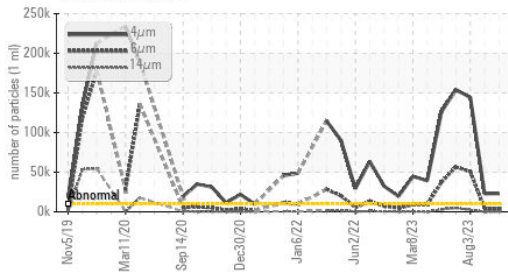
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >10000	<b>▲ 23050</b>	▲ 22868	▲ 144340
Particles >6µm	ASTM D7647 >2500	<b>▲ 3924</b>	▲ 4359	▲ 50615
Particles >14µm	ASTM D7647 >320	<b>163</b>	138	▲ 2357
Particles >21µm	ASTM D7647 >80	<b>33</b>	28	▲ 397
Particles >38µm	ASTM D7647 >20	<b>1</b>	1	12
Particles >71µm	ASTM D7647 >4	<b>0</b>	0	1
Oil Cleanliness	ISO 4406 (c) >20/18/15	<b>▲ 22/19/15</b>	▲ 22/19/14	▲ 24/23/18

## FLUID DEGRADATION

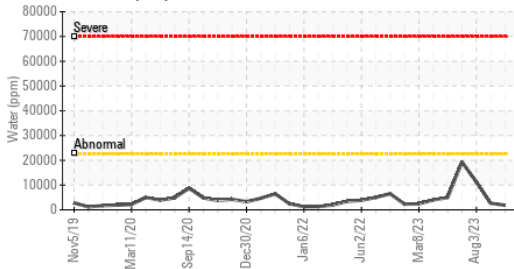
method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D8045	<b>0.39</b>	0.86	1.03

# OIL ANALYSIS REPORT

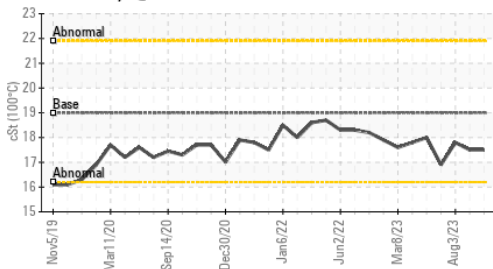
## ▲ Particle Trend



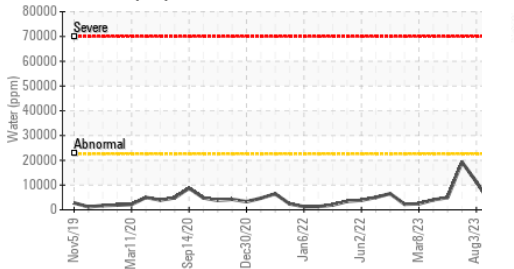
## Water (KF)



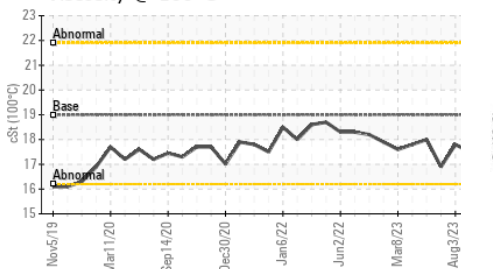
## Viscosity @ 100°C



## Water (KF)



## Viscosity @ 100°C

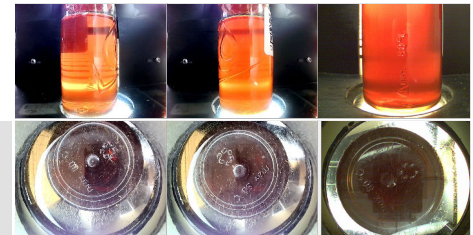


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	113	103	107
Visc @ 100°C	cSt	ASTM D445	19	17.5	17.8
Viscosity Index (VI)	Scale	ASTM D2270	189	187	184

SAMPLE IMAGES	method	limit/base	current	history1	history2
---------------	--------	------------	---------	----------	----------

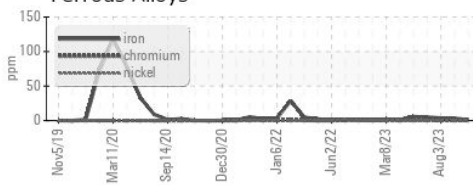
Color



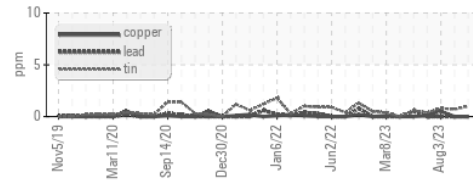
Bottom

## GRAPHS

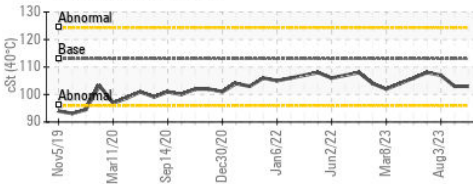
### Ferrous Alloys



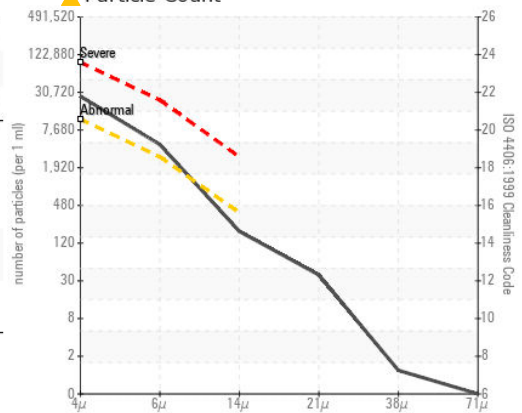
### Non-ferrous Metals



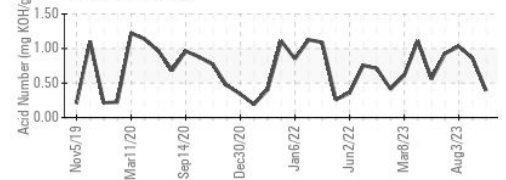
### Viscosity @ 40°C



### ▲ Particle Count



### Acid Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TO60000932 **Received** : 31 Jan 2024  
**Lab Number** : 06075756 **Diagnosed** : 01 Feb 2024  
**Unique Number** : 10857847 **Diagnostician** : Don Baldrige  
**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)

**CAMBRIAN ENERGY-SOUTH TEX FT. SMITH TREATERS**  
 5950 COMMERCE RD  
 FORT SMITH, AR  
 US 72916  
 Contact: DUSTIN FRY  
 dustin@morrowenergy.com  
 T: (479)221-7571  
 F: