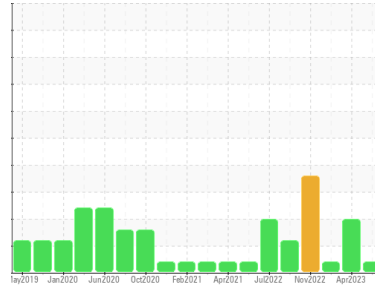


# PROBLEM SUMMARY

Sample Rating Trend



## VIS DEBRIS



Machine Id  
**BOSS XTO-NASH 56 (S/N 115761)**  
 Component  
**Compressor**  
 Fluid  
**TULCO LUBSOIL LPG WS 150 (7 GAL)**

### COMPONENT CONDITION SUMMARY

No relevant graphs to display

### RECOMMENDATION

We recommend you service the filters on this component. 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.

### PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Debris	scalar	*Visual	NONE	▲ MODER	LIGHT	▲ MODER

**Customer Id:** RICHOB  
**Sample No.:** TO90003417  
**Lab Number:** 05867324  
**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](mailto:dougb@wearcheckusa.com)

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

## RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	MISSED	Nov 30 2023	?	We recommend you service the filters on this component.
Alert	---	---	?	We were unable to perform a particle count due to a high concentration of particles present in this sample.

## HISTORICAL DIAGNOSIS

### 21 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 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



### 17 Mar 2023 Diag: Don Baldrige

#### VIS DEBRIS



We recommend you service the filters on this component. 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



### 07 Nov 2022 Diag: Angela Borella

#### WATER



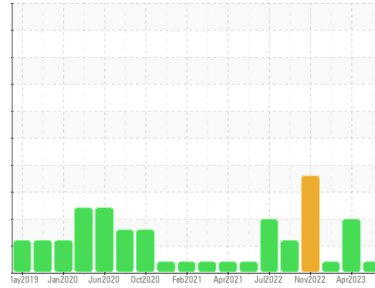
We advise that you follow the water drain-off procedure for this component. The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a high amount of particulates present in the oil. There is a high concentration of water present in the oil. The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

view report



# OIL ANALYSIS REPORT

Sample Rating Trend



VIS DEBRIS



Machine Id  
**BOSS XTO-NASH 56 (S/N 115761)**

Component  
**Compressor**

Fluid  
**TULCO LUBSOIL LPG WS 150 (7 GAL)**

**DIAGNOSIS**

**Recommendation**

We recommend you service the filters on this component. 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.

**Wear**

All component wear rates are normal.

**Contamination**

Moderate concentration of visible dirt/debris 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>TO90003417</b>	TO90003400	TO90002837
Sample Date	Client Info			<b>19 May 2023</b>	21 Apr 2023	17 Mar 2023
Machine Age	hrs	Client Info		<b>29067</b>	28634	27911
Oil Age	hrs	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	>50	<b>9</b>	11	11
Chromium	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>0</b>	0	0
Lead	ppm	ASTM D5185m	>25	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>50	<b>&lt;1</b>	<1	2
Tin	ppm	ASTM D5185m	>15	<b>2</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

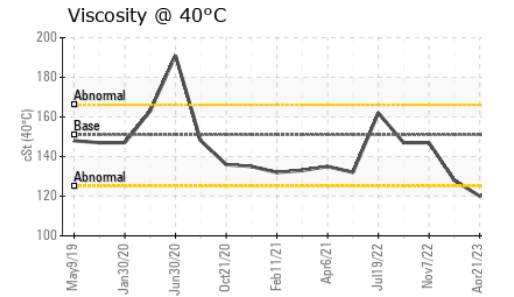
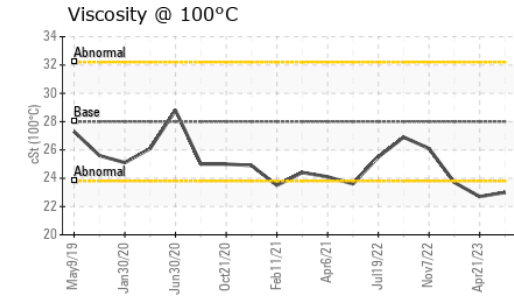
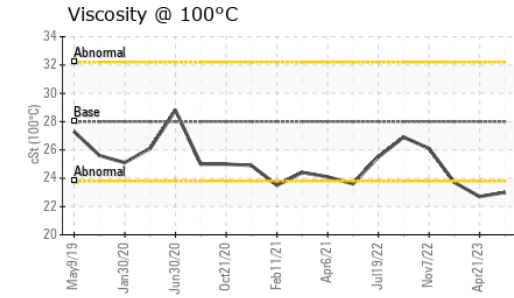
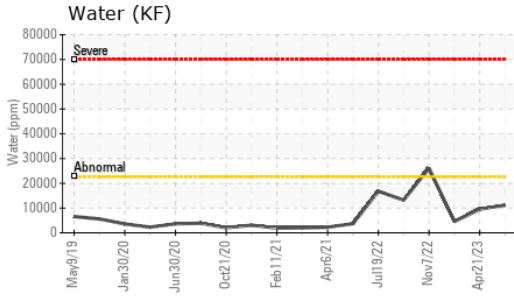
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	<b>0</b>	0	0
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	0	<b>2</b>	0	<1
Calcium	ppm	ASTM D5185m	0	<b>0</b>	14	47
Phosphorus	ppm	ASTM D5185m	0	<b>197</b>	0	5
Zinc	ppm	ASTM D5185m	0	<b>0</b>	15	11
Sulfur	ppm	ASTM D5185m	0	<b>151</b>	142	112

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>1</b>	0	<1
Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	5	6
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	2
Water	%	ASTM D6304	>2.26	<b>1.12</b>	0.952	0.453
ppm Water	ppm	ASTM D6304	>22600	<b>11200</b>	9520	4530

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	---	▲ 133573	---
Particles >6µm		ASTM D7647	>1300	---	▲ 39328	---
Particles >14µm		ASTM D7647	>320	---	▲ 953	---
Particles >21µm		ASTM D7647	>80	---	▲ 87	---
Particles >38µm		ASTM D7647	>20	---	2	---
Particles >71µm		ASTM D7647	>4	---	0	---
Oil Cleanliness		ISO 4406 (c)	>20/17/15	---	▲ 24/22/17	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.03</b>	0.19	0.34

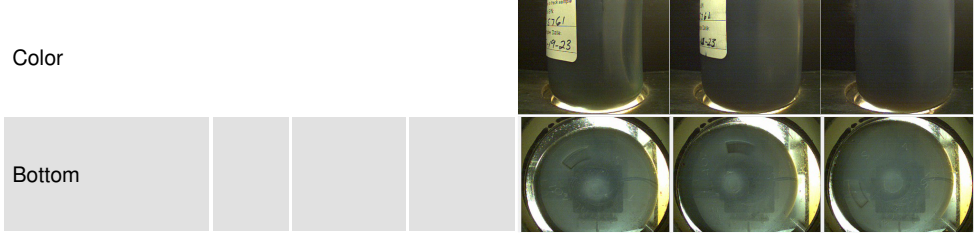
# OIL ANALYSIS REPORT



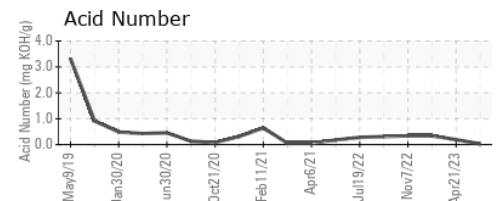
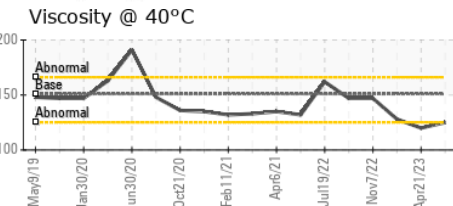
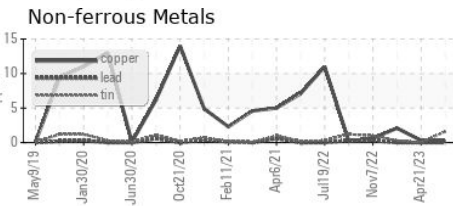
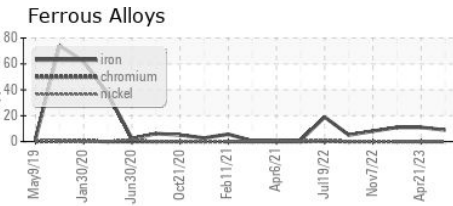
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	▲ MODER	LIGHT	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	125.0	120
Visc @ 100°C	cSt	ASTM D445	28	23.0	22.7
Viscosity Index (VI)	Scale	ASTM D2270	224	215	219

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TO90003417 **Received** : 07 Jun 2023  
**Lab Number** : 05867324 **Diagnosed** : 27 Jun 2023  
**Unique Number** : 10507108 **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)