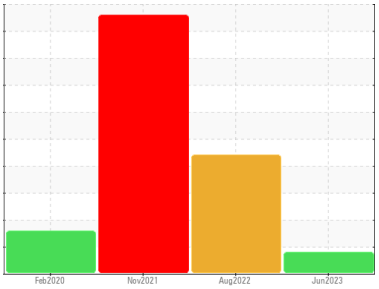
PROBLEM SUMMARY

Sample Rating Trend



SEDIMENT

Machine Id
ALPHA BLUE HEATER (S/N 97093)
Component
Heat Transfer Fluid
Fluid
TULCO LUBSOIL HEAT TRANSFER 250 (--- 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	SEVERE
Silt	scalar	*Visual	NONE	▲ **MODER**	NONE	NONE

Customer Id: BLUMUSOK
Sample No.: TO10001845
Lab Number: 05870920
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@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	---	---	?	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

10 Aug 2022 Diag: Doug Bogart

WATER

Recommend drain oil if not already done and flush with cleaner before refilling with oil. Please note that the oil was too thick to perform accurate viscosity tests.The iron level is abnormal. There is a moderate concentration of water present in the oil. The AN level is above the recommended limit. The oil is oxidized and beyond the limit of serviceability.

view report

23 Nov 2021 Diag: Doug Bogart

WEAR

Recommend drain oil if not already done and flush with cleaner before refilling with oil. Please note that the oil was too thick to perform some of the normal laboratory tests.The iron level is abnormal. No contaminants were detected in the oil. The AN level is above the recommended limit. The oil is highly oxidized and beyond the limit of serviceability.

view report

06 Feb 2020 Diag: Doug Bogart

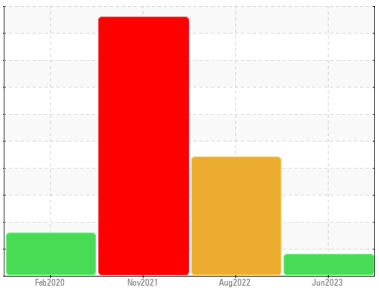
WEAR

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please note that this is a corrected copy for data entry updates.The iron level is abnormal. There is no indication of any contamination in the oil. The oil viscosity is higher than normal. The AN level is acceptable for this fluid.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



SEDIMENT

Machine Id
ALPHA BLUE HEATER (S/N 97093)
Component
Heat Transfer Fluid
Fluid
TULCO LUBSOIL HEAT TRANSFER 250 (--- 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
There is a moderate amount of visible silt present in the sample.

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	history 1	history 2
Sample Number		Client Info		**TO10001845**	TO10001173	TO10000612
Sample Date		Client Info		**07 Jun 2023**	10 Aug 2022	23 Nov 2021
Machine Age		Client Info		**14**	0	0
Oil Age		Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	ABNORMAL	SEVERE

WEAR METALS		method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m		**155**	▲ 598	⬢ 742
Chromium	ppm	ASTM D5185m		**0**	0	<1
Nickel	ppm	ASTM D5185m		**0**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	<1
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m		**0**	1	<1
Lead	ppm	ASTM D5185m		**0**	0	0
Copper	ppm	ASTM D5185m		**0**	<1	<1
Tin	ppm	ASTM D5185m		**<1**	0	0
Antimony	ppm	ASTM D5185m		**---**	---	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

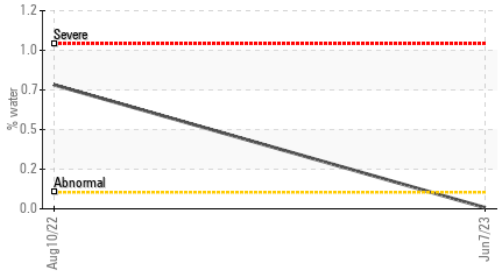
ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m		**0**	<1	31
Barium	ppm	ASTM D5185m		**0**	2	0
Molybdenum	ppm	ASTM D5185m		**0**	<1	<1
Manganese	ppm	ASTM D5185m		**2**	6	8
Magnesium	ppm	ASTM D5185m		**0**	1	1
Calcium	ppm	ASTM D5185m		**13**	9	16
Phosphorus	ppm	ASTM D5185m		**10**	23	13
Zinc	ppm	ASTM D5185m		**0**	5	10
Sulfur	ppm	ASTM D5185m	1400	**1305**	1011	913
Lithium	ppm	ASTM D5185m		**---**	---	0

CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m		**27**	2	<1
Sodium	ppm	ASTM D5185m		**2**	3	7
Potassium	ppm	ASTM D5185m	>20	**<1**	1	0
Water	%	ASTM D6304		**0.007**	▲ 0.751	---
ppm Water	ppm	ASTM D6304		**71.5**	▲ 7510	---

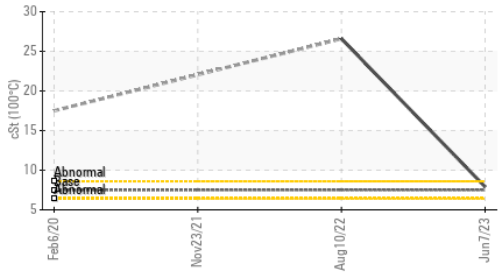
FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.05	**0.39**	▲ 1.70	⬢ 5.431

OIL ANALYSIS REPORT

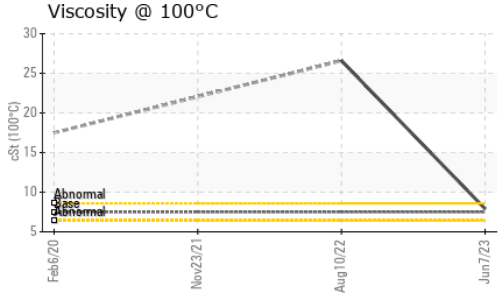
Water



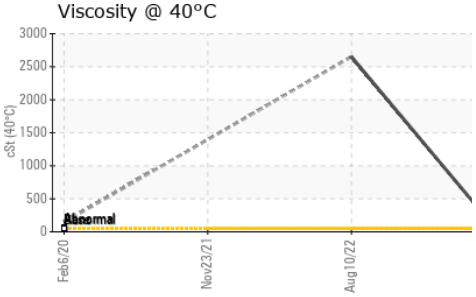
Viscosity @ 100°C



Viscosity @ 100°C



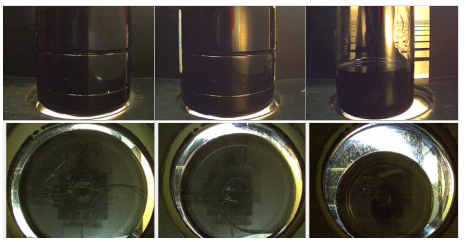
Viscosity @ 40°C



VISUAL		method	limit/base	current	history 1	history 2
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	▲ **MODER**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	▲ SOLID
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		**NEG**	▲ 0.2%	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

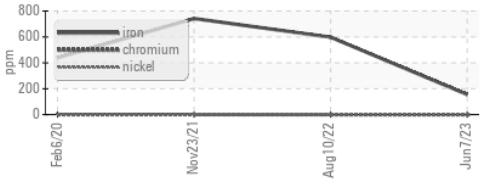
FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 40°C	cSt	ASTM D445	52	**54.6**	▲ 2652	---
Visc @ 100°C	cSt	ASTM D445	7.5	**7.9**	▲ 26.6	---
Viscosity Index (VI)	Scale	ASTM D2270	106	**111**	---	---

SAMPLE IMAGES	method	limit/base	current	history 1	history 2
Color					
Bottom					

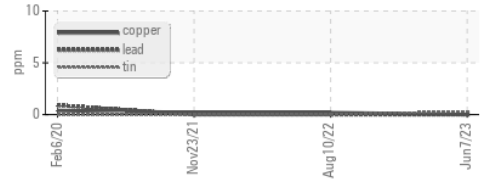


GRAPHS

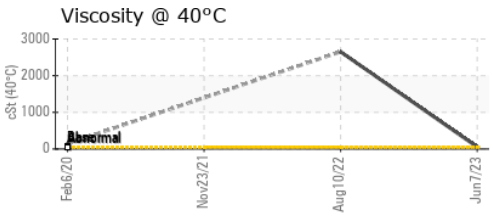
Ferrous Alloys



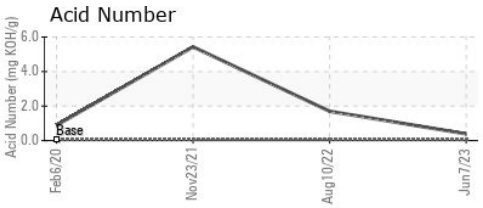
Non-ferrous Metals



Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO10001845 **Received** : 12 Jun 2023
Lab Number : 05870920 **Diagnosed** : 14 Jun 2023
Unique Number : 10510704 **Diagnostician** : Jonathan Hester
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)

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