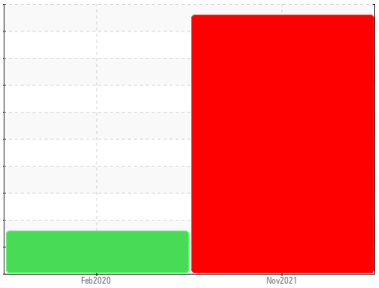
PROBLEM SUMMARY

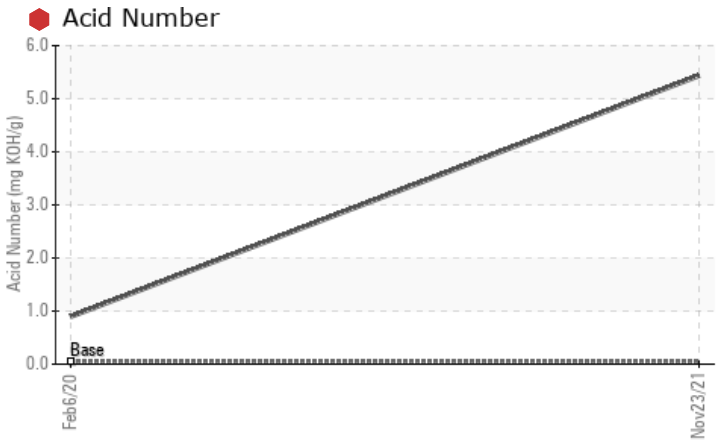
Sample Rating Trend

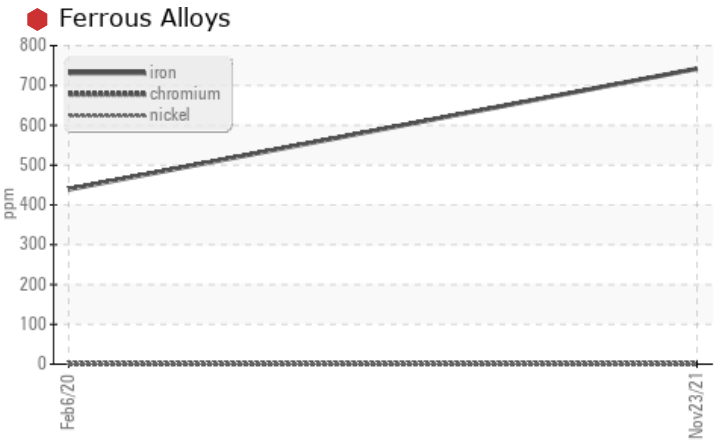


WEAR

Area
[PLANT 2371]
Machine Id
ALPHA BLUE HEATER (S/N 97093)
Component
Heat Transfer Fluid
Fluid
TULCO LUBSOIL HEAT TRANSFER 250 (--- GAL)

COMPONENT CONDITION SUMMARY





RECOMMENDATION

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.

PROBLEMATIC TEST RESULTS

				SEVERE	ABNORMAL	---
Sample Status						
Iron	ppm	ASTM D5185m		**742**	439	---
Acid Number (AN)	mg KOH/g	ASTM D8045	0.05	**5.431**	0.891	---
Debris	scalar	*Visual	NONE	**SOLID**	NONE	---

Customer Id: BLUMUSOK
Sample No.: TO10000612
Lab Number: 05413687
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

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 Fluid	MISSED	Oct 03 2022	?	Recommend drain oil if not already done and flush with cleaner before refilling with oil.
Flush System	MISSED	Oct 03 2022	?	Recommend drain oil if not already done and flush with cleaner before refilling with oil.
Alert	---	---	?	Please note that the fluid was too thick to perform some of the normal laboratory tests.

HISTORICAL DIAGNOSIS

06 Feb 2020 Diag: Doug Bogart

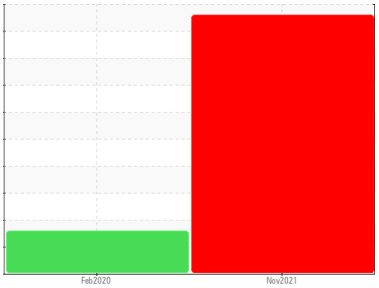
WEAR

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



WEAR

Area
[PLANT 2371]
Machine Id
ALPHA BLUE HEATER (S/N 97093)
Component
Heat Transfer Fluid
Fluid
TULCO LUBSOIL HEAT TRANSFER 250 (--- GAL)

DIAGNOSIS

Recommendation
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.

Wear
The iron level is abnormal.

Contamination
No contaminants were detected in the oil.

Fluid Condition
The AN level is above the recommended limit. The oil is highly oxidized and beyond the limit of serviceability.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**TO10000612**	TO1002080	---
Sample Date		Client Info		**23 Nov 2021**	06 Feb 2020	---
Machine Age	mths	Client Info		**0**	0	---
Oil Age	mths	Client Info		**0**	0	---
Oil Changed		Client Info		**N/A**	N/A	---
Sample Status				**SEVERE**	ABNORMAL	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m		**742**	439	---
Chromium	ppm	ASTM D5185m		**<1**	<1	---
Nickel	ppm	ASTM D5185m		**0**	<1	---
Titanium	ppm	ASTM D5185m		**<1**	<1	---
Silver	ppm	ASTM D5185m		**0**	0	---
Aluminum	ppm	ASTM D5185m		**<1**	<1	---
Lead	ppm	ASTM D5185m		**0**	<1	---
Copper	ppm	ASTM D5185m		**<1**	<1	---
Tin	ppm	ASTM D5185m		**0**	0	---
Antimony	ppm	ASTM D5185m		**0**	0	---
Vanadium	ppm	ASTM D5185m		**0**	0	---
Cadmium	ppm	ASTM D5185m		**0**	0	---

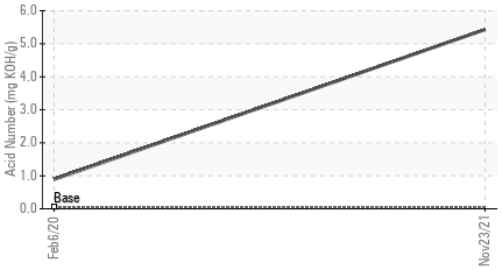
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**31**	<1	---
Barium	ppm	ASTM D5185m		**0**	0	---
Molybdenum	ppm	ASTM D5185m		**<1**	0	---
Manganese	ppm	ASTM D5185m		**8**	5	---
Magnesium	ppm	ASTM D5185m		**1**	1	---
Calcium	ppm	ASTM D5185m		**16**	24	---
Phosphorus	ppm	ASTM D5185m		**13**	14	---
Zinc	ppm	ASTM D5185m		**10**	70	---
Sulfur	ppm	ASTM D5185m	1400	**913**	1285	---
Lithium	ppm	ASTM D5185m		**0**	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m		**<1**	0	---
Sodium	ppm	ASTM D5185m		**7**	8	---
Potassium	ppm	ASTM D5185m	>20	**0**	<1	---
Water	%	ASTM D6304		**NEG**	NEG	---

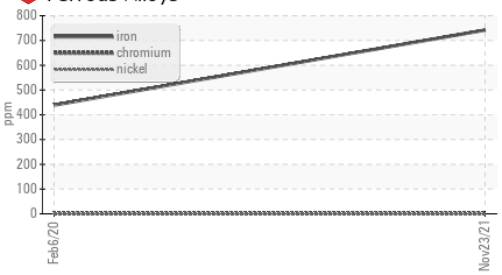
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.05	**5.431**	0.891	---

OIL ANALYSIS REPORT

Acid Number

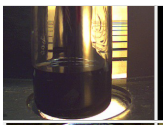
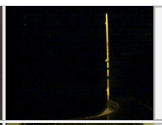
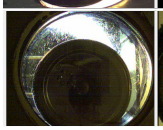


Ferrous Alloys



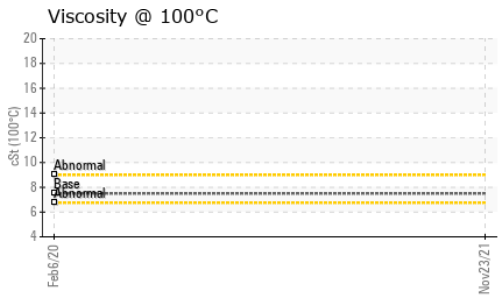
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	---
Silt	scalar	*Visual	NONE	**NONE**	NONE	---
Debris	scalar	*Visual	NONE	▲ **SOLID**	NONE	---
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	---
Appearance	scalar	*Visual	NORML	**NORML**	NORML	---
Odor	scalar	*Visual	NORML	**NORML**	NORML	---
Emulsified Water	scalar	*Visual		**NEG**	NEG	---
Free Water	scalar	*Visual		**NEG**	NEG	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	52	---	▲ 145	---
Visc @ 100°C	cSt	ASTM D445	7.5	---	▲ 17.5	---
Viscosity Index (VI)	Scale	ASTM D2270	106	---	132	---

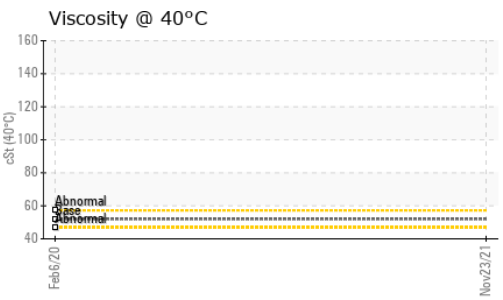
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					*no image*
Bottom					*no image*

GRAPHS

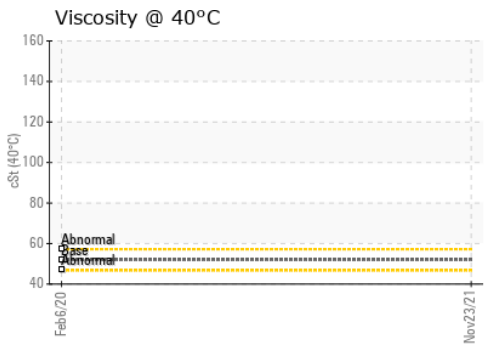
Viscosity @ 100°C



Viscosity @ 40°C



Viscosity @ 40°C



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO10000612 **Received** : 02 Dec 2021
Lab Number : 05413687 **Diagnosed** : 07 Dec 2021
Unique Number : 9762875 **Diagnostician** : Doug Bogart
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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