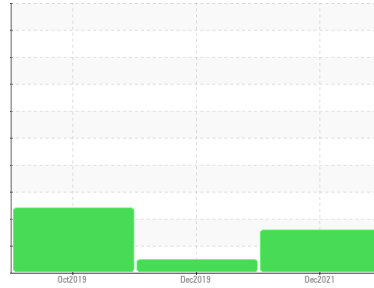


PROBLEM SUMMARY

Sample Rating Trend



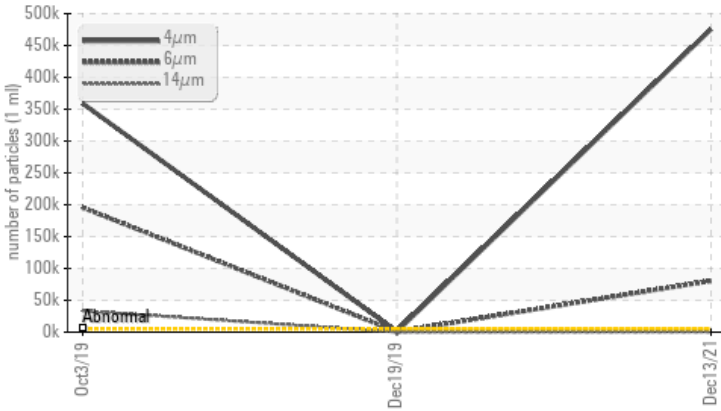
ISO



Area
NORTH YARD TK120 RETURN LINE
Machine Id
AMERICAN HEATER AHE-800-IP AMERICAN HEATER (S/N NORTH YARD)
Component
Heat Transfer Fluid
Fluid
TULCO LUBSOIL HEAT TRANSFER 250 (1150 GAL)

COMPONENT CONDITION SUMMARY

▲ Particle Trend



RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor. Please note that this is a corrected copy.

PROBLEMATIC TEST RESULTS

Sample Status			ABNORMAL	NORMAL	ABNORMAL
Particles >4µm	ASTM D7647	>5000	▲ 475517	961	▲ 358988
Particles >6µm	ASTM D7647	>1300	▲ 80534	523	▲ 195556
Particles >14µm	ASTM D7647	>160	▲ 402	89	▲ 33318
Particles >21µm	ASTM D7647	>40	▲ 64	30	▲ 11243
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ 26/24/16	17/16/14	▲ 26/25/22

Customer Id: BLUMUSTO
Sample No.: TO10000608
Lab Number: 05421251
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
Angela Borella +1 800-237-1369
angela.borella@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	---	---	?	Please note that this is a corrected copy.

HISTORICAL DIAGNOSIS

19 Dec 2019 Diag: Jonathan Hester

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

[view report](#)



03 Oct 2019 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](#)

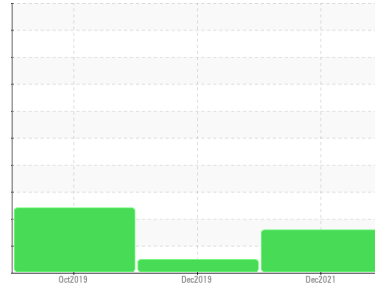


OIL ANALYSIS REPORT

Sample Rating Trend

ISO

Area
NORTH YARD TK120 RETURN LINE
 Machine Id
AMERICAN HEATER AHE-800-IP AMERICAN HEATER (S/N NORTH YARD)
 Component
Heat Transfer Fluid
 Fluid
TULCO LUBSOIL HEAT TRANSFER 250 (1150 GAL)



DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor. Please note that this is a corrected copy.

Wear

All component wear rates are normal.

Contamination

There is a high amount of particulates 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	TO10000608	TO1001285	TO1001051
Sample Date	Client Info	13 Dec 2021	19 Dec 2019	03 Oct 2019
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		ABNORMAL	NORMAL	ABNORMAL

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >20	2	6	13
Chromium	ppm	ASTM D5185m >20	0	0	0
Nickel	ppm	ASTM D5185m >20	0	0	<1
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m	0	0	<1
Aluminum	ppm	ASTM D5185m >20	0	<1	0
Lead	ppm	ASTM D5185m >20	0	0	<1
Copper	ppm	ASTM D5185m >20	0	0	<1
Tin	ppm	ASTM D5185m >20	<1	0	<1
Antimony	ppm	ASTM D5185m	0	0	0
Vanadium	ppm	ASTM D5185m	0	<1	<1
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	0	0	<1
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	0	0	0
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m	0	<1	<1
Calcium	ppm	ASTM D5185m	<1	6	13
Phosphorus	ppm	ASTM D5185m	3	0	4
Zinc	ppm	ASTM D5185m	0	<1	0
Sulfur	ppm	ASTM D5185m 1400	593	155	610

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >15	0	0	<1
Sodium	ppm	ASTM D5185m	2	4	8
Potassium	ppm	ASTM D5185m >20	0	<1	<1
Water	%	ASTM D6304 >0.05	0.003	0.001	0.007
ppm Water	ppm	ASTM D6304 >500	30.7	15.2	75.2

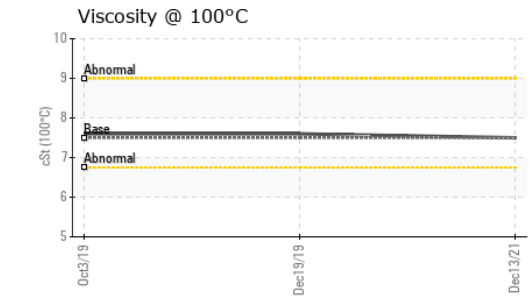
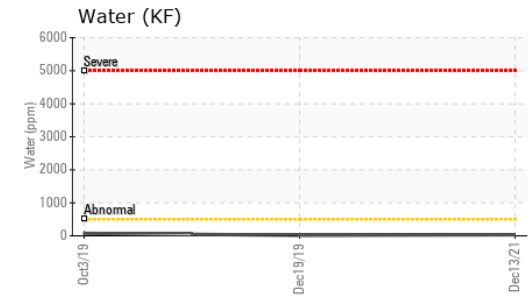
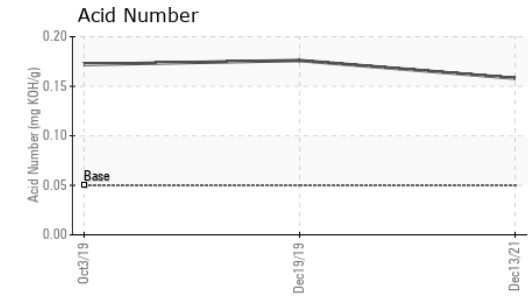
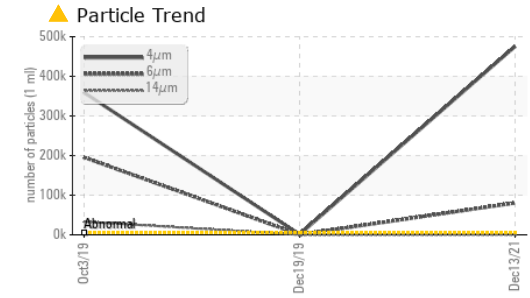
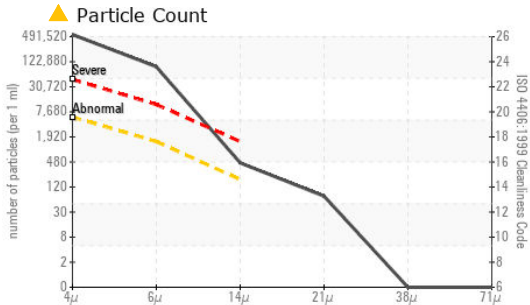
FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	▲ 475517	961	▲ 358988
Particles >6µm	ASTM D7647 >1300	▲ 80534	523	▲ 195556
Particles >14µm	ASTM D7647 >160	▲ 402	89	▲ 33318
Particles >21µm	ASTM D7647 >40	▲ 64	30	▲ 11243
Particles >38µm	ASTM D7647 >10	0	4	▲ 1736
Particles >71µm	ASTM D7647 >3	0	0	▲ 179
Oil Cleanliness	ISO 4406 (c) >19/17/14	▲ 26/24/16	17/16/14	▲ 26/25/22

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045 0.05	0.158	0.176	0.172

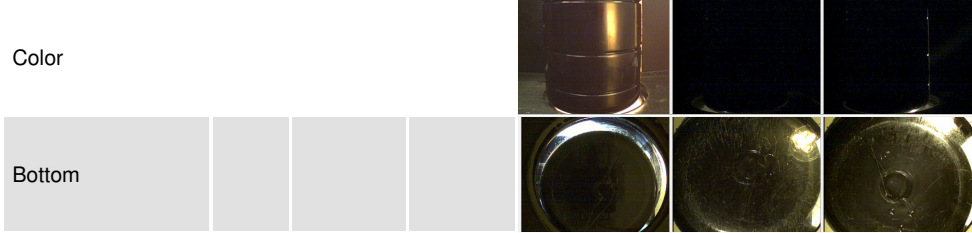
OIL ANALYSIS REPORT



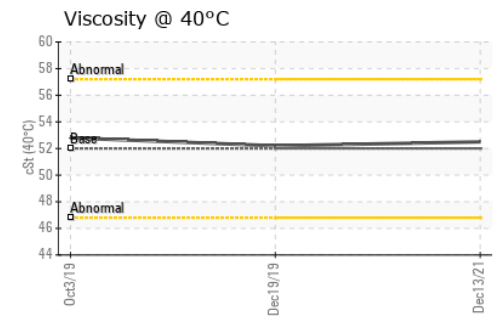
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D445	52	52.5	52.2	52.8
Visc @ 100°C	cSt	ASTM D445	7.5	7.5	7.6	7.6
Viscosity Index (VI)	Scale	ASTM D2270	106	104	108	106

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO10000608 **Received** : 13 Dec 2021
Lab Number : 05421251 **Diagnosed** : 01 Feb 2022
Unique Number : 9775442 **Diagnostician** : Angela Borella
Test Package : IND 2 (Additional Tests: KF, KV100, PrtCount, VI)

ERGON - PORT AMERICAN - VOLCANIC
 2501 PORT PL
 MUSKOGEE, OK
 US 74403
 Contact: COLE HOWELL

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: (918)683-6061