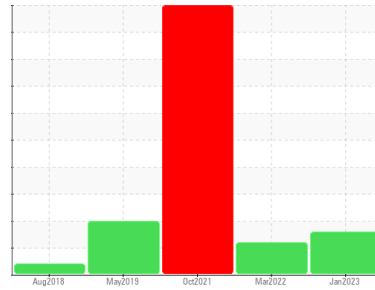




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id

320

Component

Hydraulic System

Fluid

AW HYDRAULIC OIL ISO 46 (100 GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor. (Customer Sample Comment: 11860 hours)

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		PTK0003771	PTK0003321	PTK0000857
Sample Date	Client Info		09 Jan 2023	09 Mar 2022	21 Oct 2021
Machine Age	hrs	Client Info	11860	11682	11365
Oil Age	hrs	Client Info	11860	11682	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			ABNORMAL	ABNORMAL	SEVERE

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.1	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >20	10	12	13
Chromium	ppm	ASTM D5185m >10	<1	<1	<1
Nickel	ppm	ASTM D5185m >10	0	0	<1
Titanium	ppm	ASTM D5185m	0	<1	<1
Silver	ppm	ASTM D5185m	0	<1	3
Aluminum	ppm	ASTM D5185m >10	1	<1	<1
Lead	ppm	ASTM D5185m >10	<1	1	14
Copper	ppm	ASTM D5185m >75	23	23	51
Tin	ppm	ASTM D5185m >10	<1	2	1
Antimony	ppm	ASTM D5185m	---	---	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	1

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 5	20	20	19
Barium	ppm	ASTM D5185m 5	0	0	0
Molybdenum	ppm	ASTM D5185m 5	10	10	9
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m 25	53	61	56
Calcium	ppm	ASTM D5185m 200	2622	2620	2852
Phosphorus	ppm	ASTM D5185m 300	899	977	1033
Zinc	ppm	ASTM D5185m 370	1019	1031	1132
Sulfur	ppm	ASTM D5185m 2500	4137	3113	3486

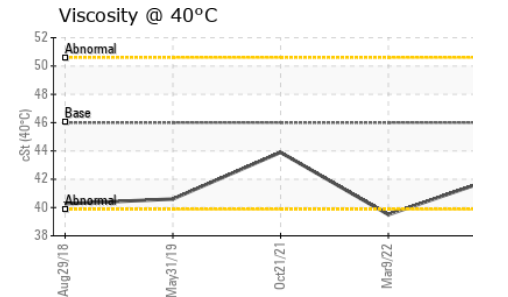
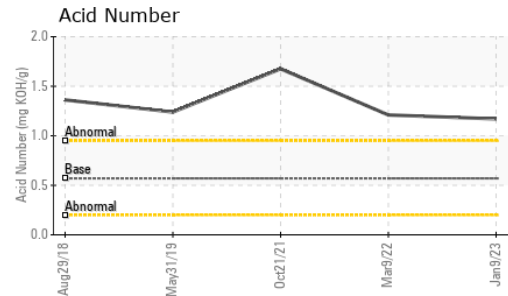
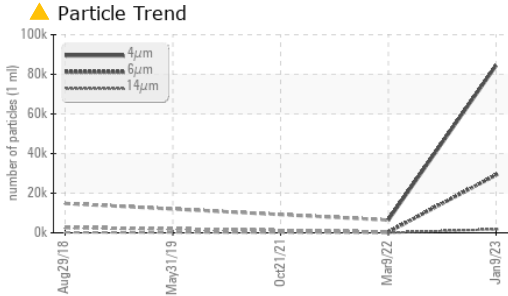
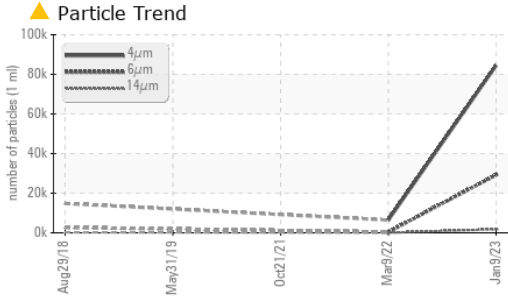
CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	7	5	5
Sodium	ppm	ASTM D5185m	6	0	5
Potassium	ppm	ASTM D5185m >20	<1	0	<1

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		84401	6401	---
Particles >6µm	ASTM D7647	>2500	▲ 29202	385	---
Particles >14µm	ASTM D7647	>320	▲ 1760	20	---
Particles >21µm	ASTM D7647	>80	▲ 320	5	---
Particles >38µm	ASTM D7647	>20	5	0	---
Particles >71µm	ASTM D7647	>4	0	0	---
Oil Cleanliness	ISO 4406 (c)	>18/15	▲ 22/18	20/16/11	---

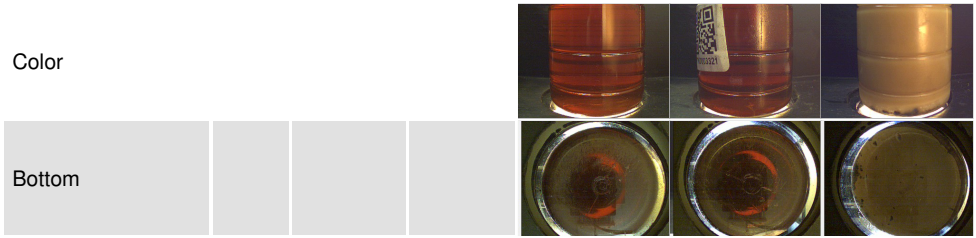
OIL ANALYSIS REPORT



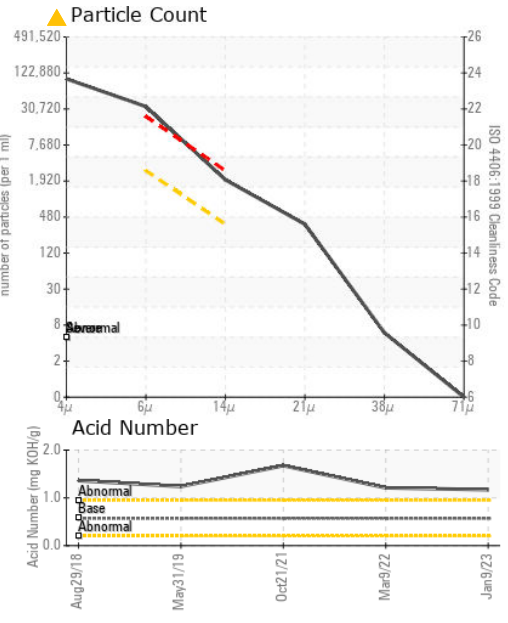
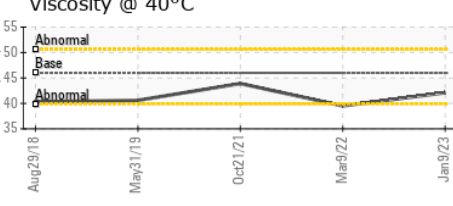
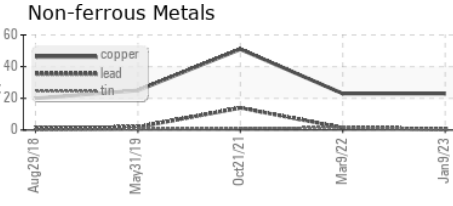
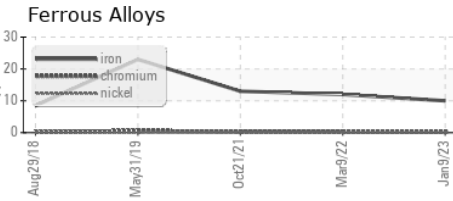
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	1.17	1.21	1.676
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	LIGHT	▲ LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	▲ MODER
Debris	scalar	*Visual	NONE	LIGHT	NONE	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	▲ MILKY
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	10.0

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46	42.1	39.5	43.9

SAMPLE IMAGES		method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PTK0003771 **Received** : 06 Feb 2023
Lab Number : 05759421 **Diagnosed** : 07 Feb 2023
Unique Number : 10324028 **Diagnostician** : Jonathan Hester
Test Package : MOB 2

DRILLING SERVICE
 13230 FERGUSON LN
 BRIDGETON, MO
 US 63044
 Contact: BRUCE MURPHY
 bdmurphy@drillingserviceco.com
 T: (314)291-1111
 F: (314)291-1115

Certificate L2367
 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)