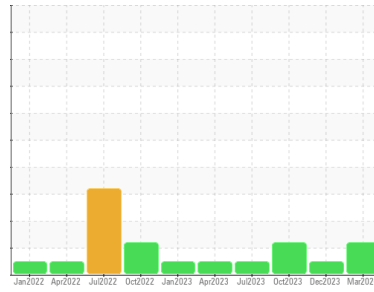


# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area

**TUMBLE ROOM [98827287]**

Machine Id

**KR-GR-003066 - TUMBLER 1 (S/N TUMBLE ROOM - 11513089)**

Component

**Hydraulic System**

Fluid

**AW HYDRAULIC OIL ISO 46 (--- GAL)**

## DIAGNOSIS

### Recommendation

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. ( Customer Sample Comment: 98827287 )

### Wear

All component wear rates are normal.

### Contamination

There is a high amount of silt (particulates < 14 microns in size) 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>PCA0115884</b>	PCA0114826	PCA0104782
Sample Date	Client Info			<b>14 Mar 2024</b>	20 Dec 2023	15 Oct 2023
Machine Age	hrs	Client Info		<b>0</b>	0	0
Oil Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed	Client Info			<b>N/A</b>	Not Changd	N/A
Sample Status				<b>ABNORMAL</b>	NORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>0.05	<b>NEG</b>	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	<b>4</b>	4	5
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	1	1
Nickel	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	0	<1
Lead	ppm	ASTM D5185m	>20	<b>2</b>	<1	<1
Copper	ppm	ASTM D5185m	>20	<b>8</b>	6	6
Tin	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	<b>0</b>	0	0
Barium	ppm	ASTM D5185m	5	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	5	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	25	<b>&lt;1</b>	0	0
Calcium	ppm	ASTM D5185m	200	<b>18</b>	15	5
Phosphorus	ppm	ASTM D5185m	300	<b>336</b>	299	292
Zinc	ppm	ASTM D5185m	370	<b>263</b>	241	240
Sulfur	ppm	ASTM D5185m	2500	<b>5469</b>	4695	4655

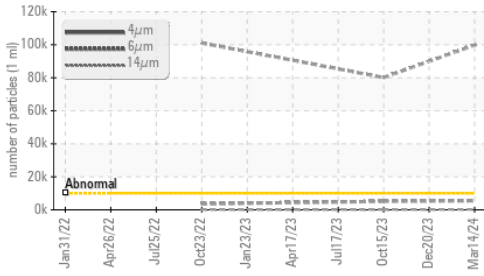
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	<b>3</b>	2	2
Sodium	ppm	ASTM D5185m		<b>0</b>	1	<1
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	2	0

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	<b>▲ 99810</b>	---	▲ 80142
Particles >6µm		ASTM D7647	>2500	<b>▲ 5512</b>	---	▲ 5111
Particles >14µm		ASTM D7647	>640	<b>123</b>	---	11
Particles >21µm		ASTM D7647	>160	<b>33</b>	---	3
Particles >38µm		ASTM D7647	>40	<b>4</b>	---	1
Particles >71µm		ASTM D7647	>10	<b>0</b>	---	0
Oil Cleanliness		ISO 4406 (c)	>20/18/16	<b>▲ 24/20/14</b>	---	▲ 24/20/11

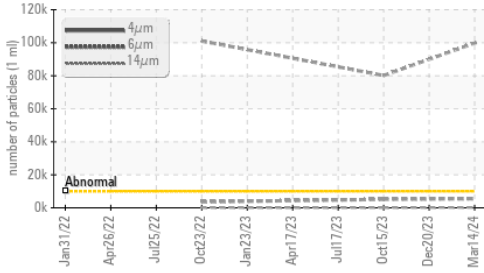
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	<b>0.45</b>	---	0.42

# OIL ANALYSIS REPORT

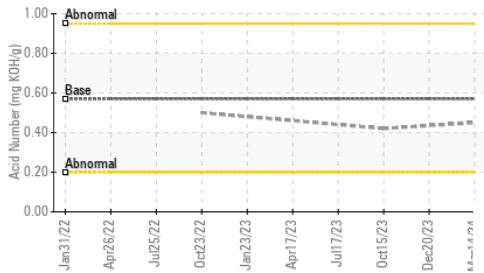
## ▲ Particle Trend



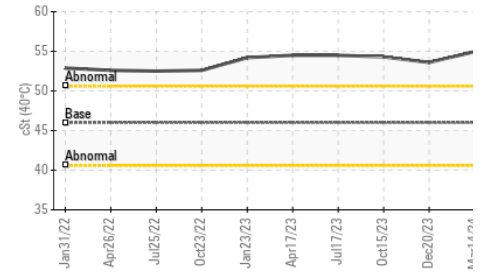
## ▲ Particle Trend



## Acid Number



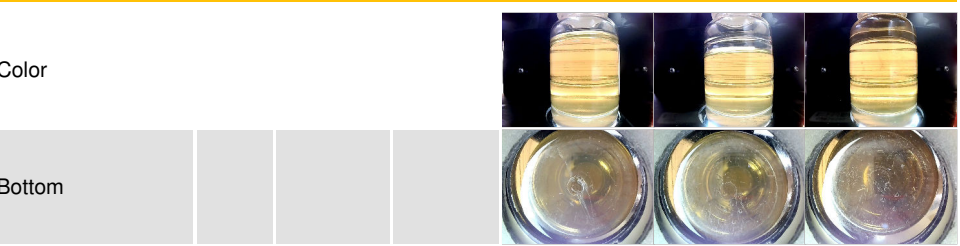
## Viscosity @ 40°C



PARAMETER	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	LIGHT
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

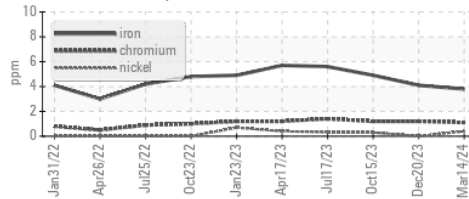
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46	54.96	53.6

## SAMPLE IMAGES

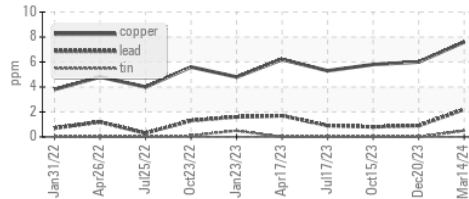


## GRAPHS

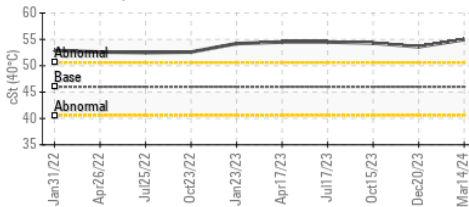
### Ferrous Alloys



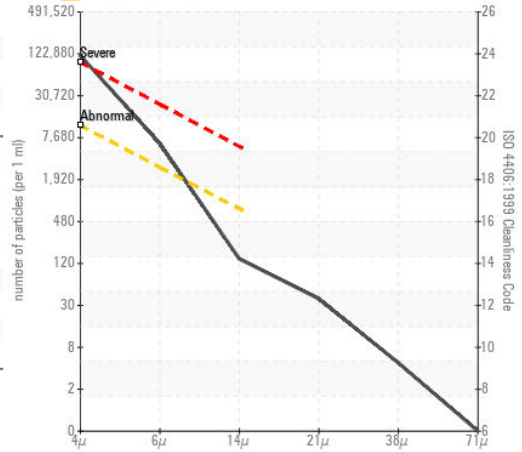
### Non-ferrous Metals



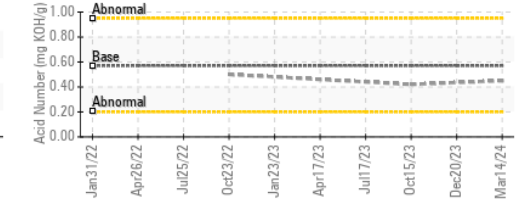
### Viscosity @ 40°C



### ▲ Particle Count



### Acid Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0115884  
**Lab Number** : 06133232  
**Unique Number** : 10952697  
**Test Package** : IND 2

**Received** : 29 Mar 2024  
**Tested** : 05 Apr 2024  
**Diagnosed** : 05 Apr 2024 - Jonathan Hester

**KraftHeinz - Kirksville - Plant 8333 PCA**  
 2504 INDUSTRIAL DR  
 KIRKSVILLE, MO  
 US 63501

Contact: WALLACE WARD  
 wallace.ward@kraftheinzcompany.com

T: (660)627-1031

F: (660)627-5887

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)