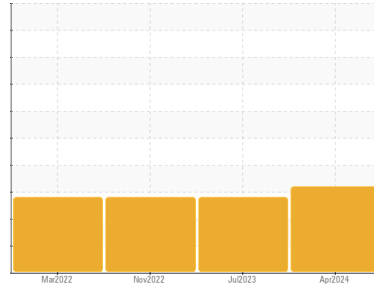




# OIL ANALYSIS REPORT

Sample Rating Trend



**WEAR**



Area

**CAST HOUSE/CRANES**

Machine Id

**92 WEST BRIDGE GEARBOX 1015-M92-3000**

Component

**Gearbox**

Fluid

**CITGO COMPOUND EP 320 (15 GAL)**

## DIAGNOSIS

### Recommendation

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.

### Wear

The aluminum level is abnormal. All other 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		<b>KFS0004637</b>	KFS0003335	KFS0002570
Sample Date	Client Info		<b>19 Apr 2024</b>	03 Jul 2023	22 Nov 2022
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>	N/A	N/A
Sample Status			<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>200	<b>94</b>	100	127
Chromium	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>▲ 31</b>	▲ 33	▲ 33
Lead	ppm	ASTM D5185m	>100	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>200	<b>2</b>	2	4
Tin	ppm	ASTM D5185m	>25	<b>&lt;1</b>	0	0
Antimony	ppm	ASTM D5185m	>5	<b>---</b>	---	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		<b>7</b>	2	6
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Manganese	ppm	ASTM D5185m		<b>3</b>	2	3
Magnesium	ppm	ASTM D5185m		<b>5</b>	2	<1
Calcium	ppm	ASTM D5185m		<b>14</b>	9	9
Phosphorus	ppm	ASTM D5185m		<b>250</b>	292	326
Zinc	ppm	ASTM D5185m		<b>61</b>	76	88
Sulfur	ppm	ASTM D5185m		<b>7691</b>	7771	6943

## CONTAMINANTS

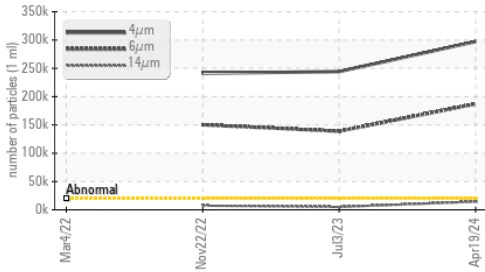
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>50	<b>10</b>	4	4
Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	<1	0

## FLUID CLEANLINESS

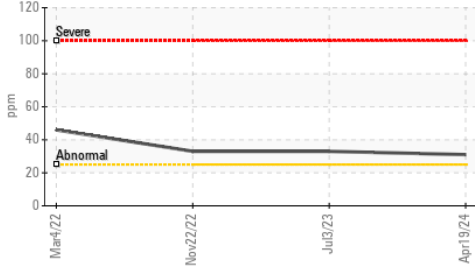
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	<b>▲ 297262</b>	▲ 244265	▲ 241211
Particles >6µm	ASTM D7647	>5000	<b>▲ 187244</b>	▲ 138850	▲ 150147
Particles >14µm	ASTM D7647	>640	<b>▲ 14479</b>	▲ 5037	▲ 7326
Particles >21µm	ASTM D7647	>160	<b>▲ 2741</b>	▲ 687	▲ 672
Particles >38µm	ASTM D7647	>40	<b>▲ 61</b>	2	9
Particles >71µm	ASTM D7647	>10	<b>1</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>21/19/16	<b>▲ 25/25/21</b>	▲ 25/24/20	▲ 25/24/20

# OIL ANALYSIS REPORT

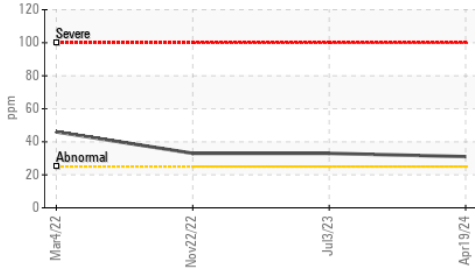
## Particle Trend



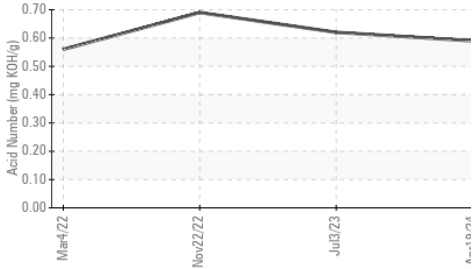
## Aluminum (ppm)



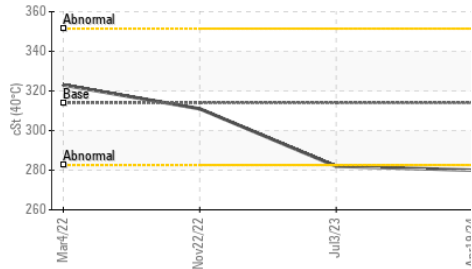
## Aluminum (ppm)



## Acid Number



## Viscosity @ 40°C

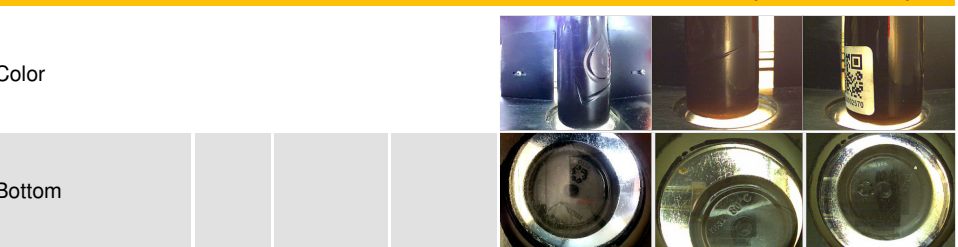


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.59</b>	0.62	0.69

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	*Visual	NONE	<b>MODER</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG
Free Water	scalar	*Visual		<b>NEG</b>	NEG	NEG

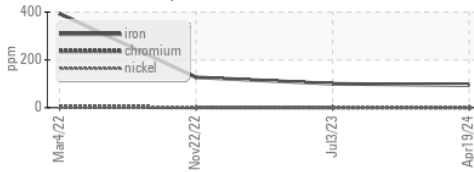
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	314	<b>280</b>	282	311

## SAMPLE IMAGES

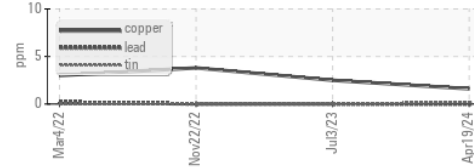


## GRAPHS

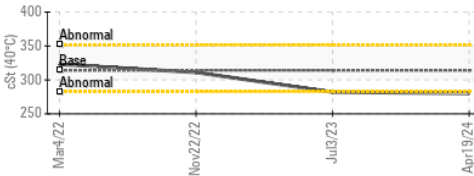
### Ferrous Alloys



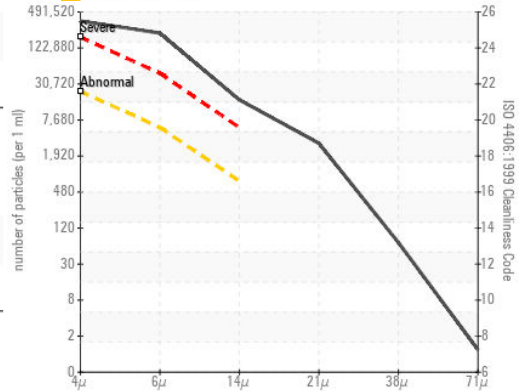
### Non-ferrous Metals



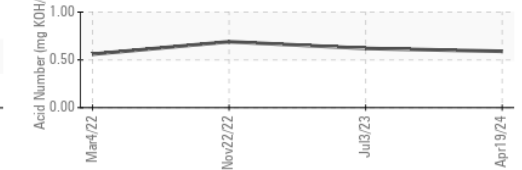
### Viscosity @ 40°C



### Particle Count



### Acid Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : KFS0004637

**Lab Number** : 06179313

**Unique Number** : 11030639

**Test Package** : IND 2 ( Additional Tests: PrtCount )

**Received** : 14 May 2024

**Tested** : 15 May 2024

**Diagnosed** : 16 May 2024 - Don Baldrige

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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