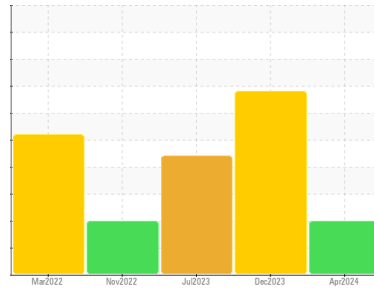




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area

CAST HOUSE/CRANES

Machine Id

92 AUX HOIST GEARBOX 1015-M92-5000

Component

Gearbox

Fluid

CITGO COMPOUND EP 320 (10 GAL)

DIAGNOSIS

Recommendation

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

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	KFS0004639	KFS0004922	KFS0003317
Sample Date	Client Info	19 Apr 2024	15 Dec 2023	03 Jul 2023
Machine Age	hrs	0	0	0
Oil Age	hrs	0	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		ABNORMAL	SEVERE	SEVERE

CONTAMINATION

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

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >200	64	193	65
Chromium	ppm ASTM D5185m >15	0	<1	0
Nickel	ppm ASTM D5185m >15	<1	<1	0
Titanium	ppm ASTM D5185m	<1	0	0
Silver	ppm ASTM D5185m	0	0	0
Aluminum	ppm ASTM D5185m >25	6	▲ 52	7
Lead	ppm ASTM D5185m >100	0	0	0
Copper	ppm ASTM D5185m >200	<1	3	<1
Tin	ppm ASTM D5185m >25	<1	0	0
Vanadium	ppm ASTM D5185m	0	0	<1
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m	22	5	22
Barium	ppm ASTM D5185m	<1	0	0
Molybdenum	ppm ASTM D5185m	0	2	0
Manganese	ppm ASTM D5185m	2	2	1
Magnesium	ppm ASTM D5185m	6	2	4
Calcium	ppm ASTM D5185m	23	10	20
Phosphorus	ppm ASTM D5185m	259	292	262
Zinc	ppm ASTM D5185m	16	68	9
Sulfur	ppm ASTM D5185m	7809	8578	8060

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >50	3	5	2
Sodium	ppm ASTM D5185m	2	0	1
Potassium	ppm ASTM D5185m >20	10	1	9

FLUID CLEANLINESS

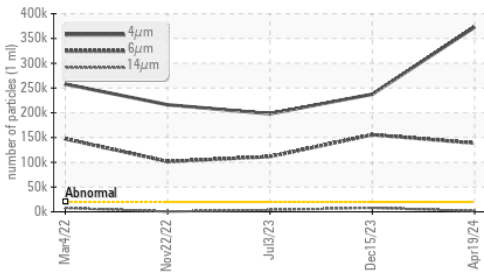
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >20000	▲ 372880	▲ 237447	▲ 198008
Particles >6µm	ASTM D7647 >5000	▲ 138636	▲ 155632	▲ 111389
Particles >14µm	ASTM D7647 >640	▲ 1460	▲ 8000	▲ 3596
Particles >21µm	ASTM D7647 >160	▲ 126	▲ 1067	▲ 526
Particles >38µm	ASTM D7647 >40	1	14	6
Particles >71µm	ASTM D7647 >10	0	2	0
Oil Cleanliness	ISO 4406 (c) >21/19/16	▲ 26/24/18	▲ 25/24/20	▲ 25/24/19

FLUID DEGRADATION

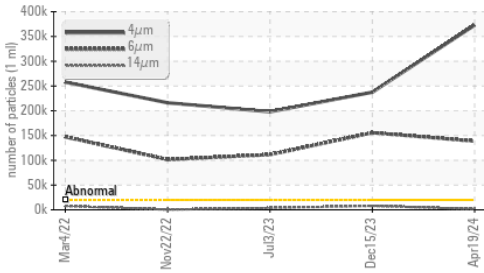
method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D8045	0.58	0.54	0.54

OIL ANALYSIS REPORT

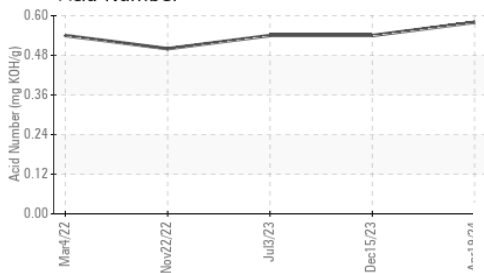
▲ Particle Trend



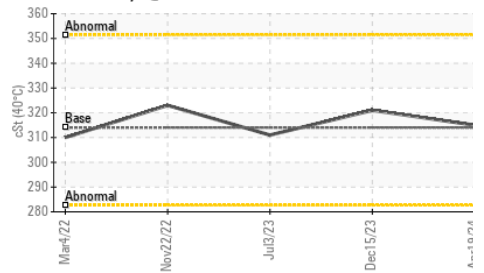
▲ Particle Trend



Acid Number



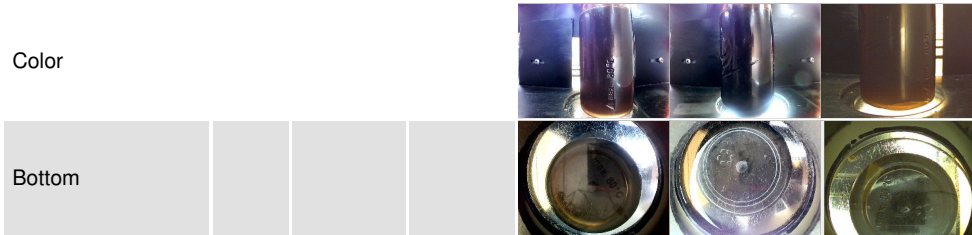
Viscosity @ 40°C



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	LIGHT
Debris	scalar	*Visual	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

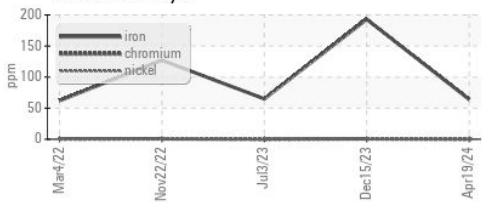
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 314	315	321	311

SAMPLE IMAGES	method	limit/base	current	history1	history2
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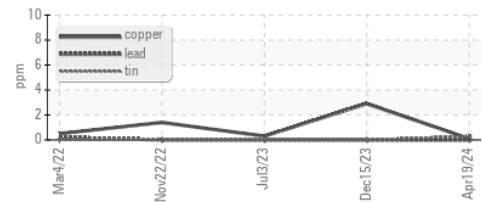


GRAPHS

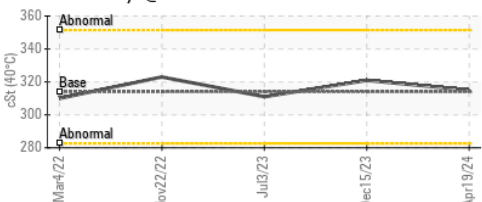
Ferrous Alloys



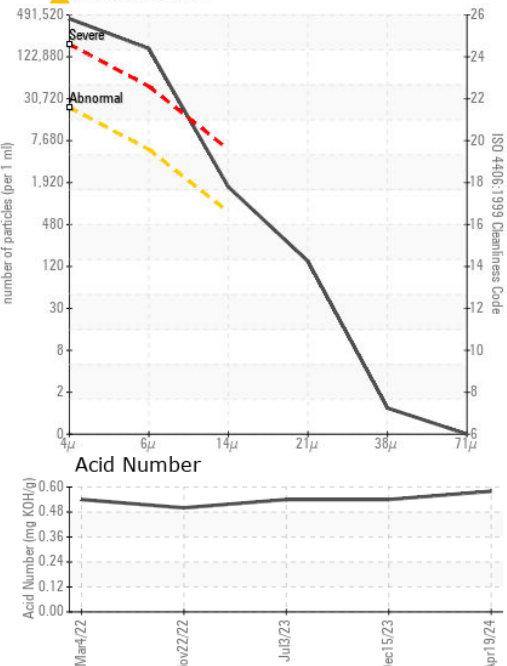
Non-ferrous Metals



Viscosity @ 40°C



▲ Particle Count



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KFS0004639 **Received** : 14 May 2024
Lab Number : **06179315** **Tested** : 15 May 2024
Unique Number : 11030641 **Diagnosed** : 16 May 2024 - Don Baldrige
Test Package : IND 2 (Additional Tests: PrtCount)

CONSTELLIUM
 4805 SECOND STREET
 MUSCLE SHOALS, AL
 US 35661
 Contact: Randy Nichols
 randall.nichols@constellium.com
 T: (256)386-6956
 F:

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)