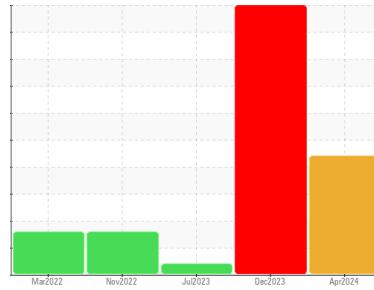




PROBLEM SUMMARY

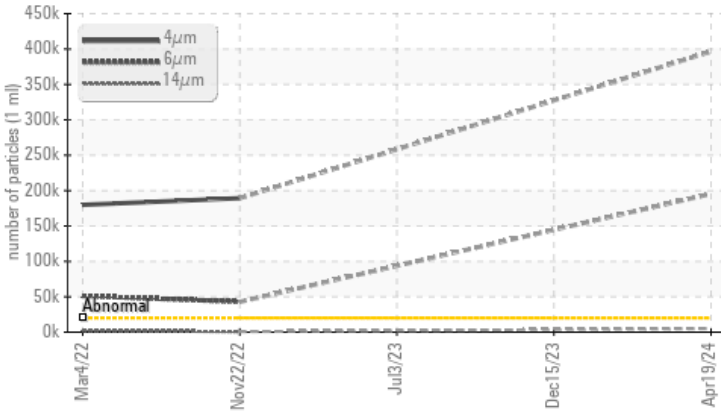
Area
CAST HOUSE/CRANES
 Machine Id
91 AUX HOIST GEARBOX 1015-M91-5000
 Component
Gearbox
 Fluid
CITGO COMPOUND EP 320 (15 GAL)

Sample Rating Trend



COMPONENT CONDITION SUMMARY

▲ Particle Trend



RECOMMENDATION

The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status	ASTM D7647	SEVERE	SEVERE	ABNORMAL
Particles >4µm	>20000	▲ 396598	---	---
Particles >6µm	>5000	▲ 195470	---	---
Particles >14µm	>640	▲ 4941	---	---
Particles >21µm	>160	▲ 608	---	---
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ 26/25/19	---

Customer Id: CONMUSAL
 Sample No.: KFS0004635
 Lab Number: 06179319
 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
Check Breathers	---	---	?	The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather.

HISTORICAL DIAGNOSIS

WEAR



15 Dec 2023 Diag: Jonathan Hester

We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. We were unable to perform a particle count due to a high concentration of particles present in this sample. Gear wear is indicated. Moderate concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

view report



VIS DEBRIS



03 Jul 2023 Diag: Jonathan Hester

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample. All component wear rates are normal. Moderate concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



ISO



22 Nov 2022 Diag: Don Baldrige

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.

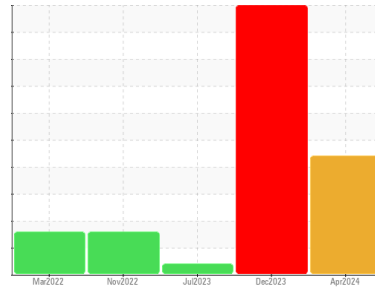
view report





OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area

CAST HOUSE/CRANES

Machine Id

91 AUX HOIST GEARBOX 1015-M91-5000

Component

Gearbox

Fluid

CITGO COMPOUND EP 320 (15 GAL)

DIAGNOSIS

▲ Recommendation

The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. 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.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		KFS0004635	KFS0004917	KFS0003314
Sample Date	Client Info		19 Apr 2024	15 Dec 2023	03 Jul 2023
Machine Age	hrs	Client Info	0	0	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			SEVERE	SEVERE	ABNORMAL

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	108	▲ 1142	66
Chromium	ppm	ASTM D5185m	>15	<1	8	<1
Nickel	ppm	ASTM D5185m	>15	<1	7	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	4	▲ 128	3
Lead	ppm	ASTM D5185m	>100	0	<1	<1
Copper	ppm	ASTM D5185m	>200	<1	8	8
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		12	8	0
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		0	4	0
Manganese	ppm	ASTM D5185m		2	15	1
Magnesium	ppm	ASTM D5185m		4	9	3
Calcium	ppm	ASTM D5185m		8	116	9
Phosphorus	ppm	ASTM D5185m		297	420	93
Zinc	ppm	ASTM D5185m		23	191	10
Sulfur	ppm	ASTM D5185m		7460	8049	7901

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>50	3	49	34
Sodium	ppm	ASTM D5185m		1	3	<1
Potassium	ppm	ASTM D5185m	>20	11	4	2

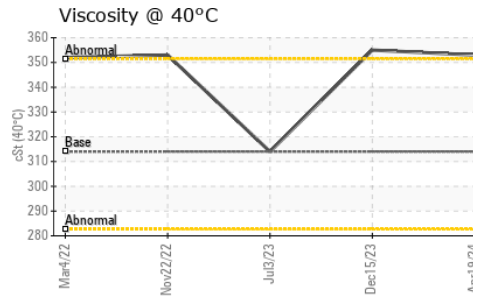
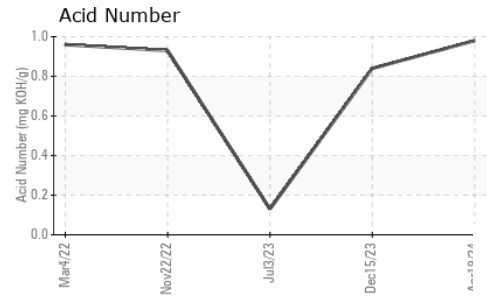
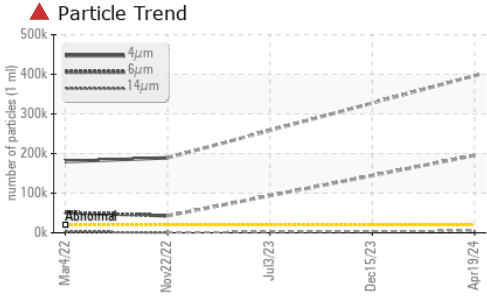
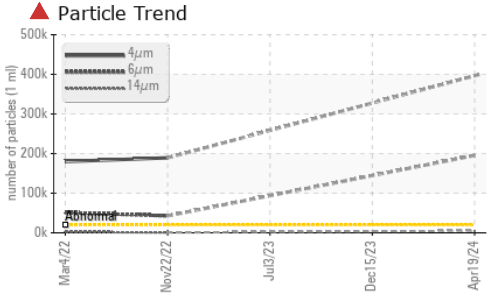
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	▲ 396598	---	---
Particles >6µm	ASTM D7647	>5000	▲ 195470	---	---
Particles >14µm	ASTM D7647	>640	▲ 4941	---	---
Particles >21µm	ASTM D7647	>160	▲ 608	---	---
Particles >38µm	ASTM D7647	>40	8	---	---
Particles >71µm	ASTM D7647	>10	0	---	---
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ 26/25/19	---	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.98	0.84	0.13

OIL ANALYSIS REPORT

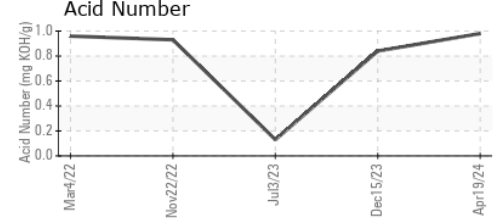
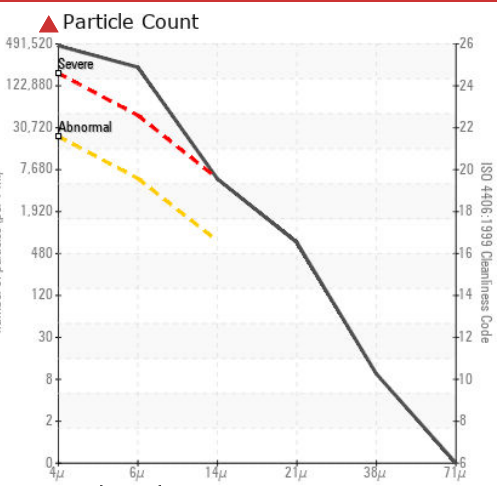
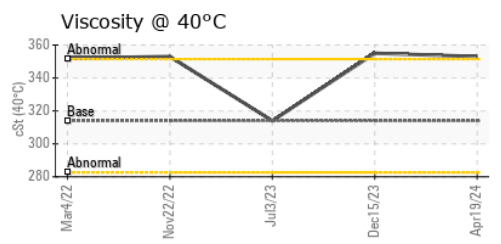
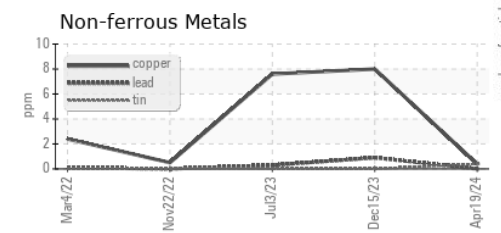
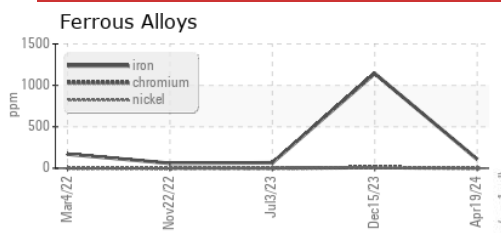


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT ▲ MODER	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
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	353	355	314

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KFS0004635 **Received** : 14 May 2024
Lab Number : 06179319 **Tested** : 15 May 2024
Unique Number : 11030645 **Diagnosed** : 16 May 2024 - Angela Borella
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)