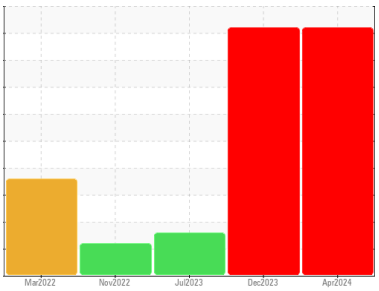
PROBLEM SUMMARY

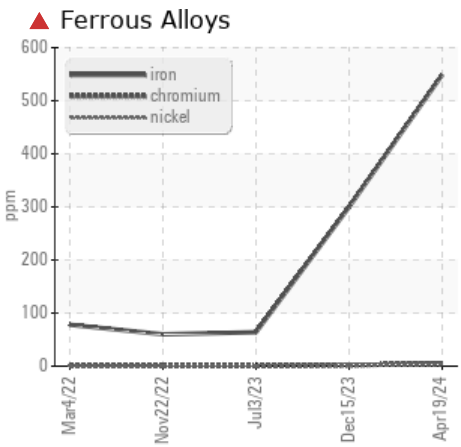
Sample Rating Trend

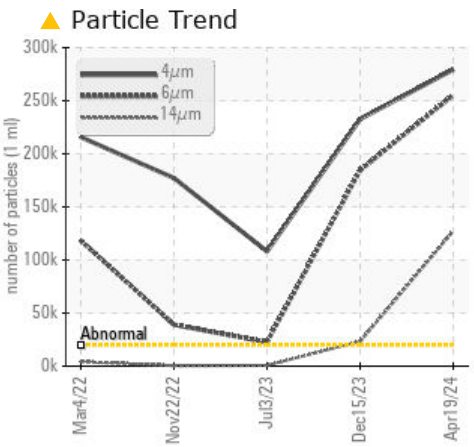


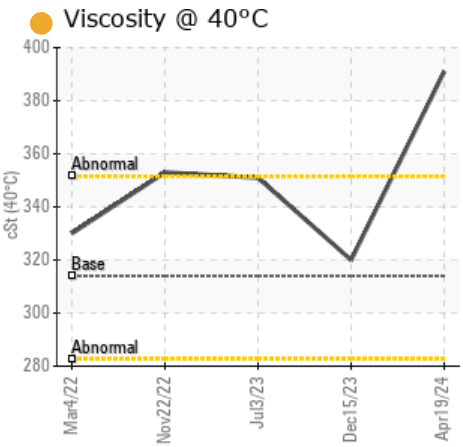
WEAR

Area
CAST HOUSE/CRANES
Machine Id
91 MAIN HOIST GEARBOX 1015-M91-4000
Component
Gearbox
Fluid
CITGO COMPOUND EP 320 (25 GAL)

COMPONENT CONDITION SUMMARY







RECOMMENDATION

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.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	SEVERE	ABNORMAL
Iron	ppm	ASTM D5185m	>200	▲ **549**	▲ 300	64
Particles >4µm		ASTM D7647	>20000	▲ **279391**	▲ 232708	▲ 108121
Particles >6µm		ASTM D7647	>5000	▲ **255281**	▲ 184430	▲ 22604
Particles >14µm		ASTM D7647	>640	▲ **126976**	▲ 23267	▲ 657
Particles >21µm		ASTM D7647	>160	▲ **50989**	▲ 2366	143
Particles >38µm		ASTM D7647	>40	▲ **1178**	13	2
Particles >71µm		ASTM D7647	>10	▲ **30**	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ **25/25/24**	▲ 25/25/22	▲ 24/22/17

Customer Id: CONMUSAL
Sample No.: KFS0004642
Lab Number: 06178717
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Don Baldridge +1
don.b505@comcast.net

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Inspect Wear Source	---	---	?	We advise that you inspect for the source(s) of wear.
Change Fluid	---	---	?	We recommend that you drain the oil from the component if this has not already been done.
Resample	---	---	?	We recommend an early resample to monitor this condition.

HISTORICAL DIAGNOSIS

ISO

15 Dec 2023 Diag: Angela Borella
Check seals and/or filters for points of contaminant entry. 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. Resample at the next service interval to monitor.Gear wear is indicated. There is a high amount of particulates 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

ISO

03 Jul 2023 Diag: Doug Bogart
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. The condition of the oil is acceptable for the time in service.

view report

ISO

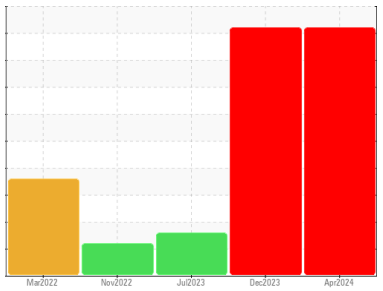
22 Nov 2022 Diag: Don Baldridge
We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

view report

KIMBRO FLUID SOLUTIONS

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
CAST HOUSE/CRANES
Machine Id
91 MAIN HOIST GEARBOX 1015-M91-4000
Component
Gearbox
Fluid
CITGO COMPOUND EP 320 (25 GAL)

DIAGNOSIS

▲ Recommendation
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.

▲ Wear
Gear wear is indicated.

▲ Contamination
There is a high amount of particulates present in the oil.

● Fluid Condition
The oil viscosity is higher than normal. The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**KFS0004642**	KFS0004918	KFS0003321
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	▲ **549**	▲ 300	64
Chromium	ppm	ASTM D5185m	>15	**6**	2	0
Nickel	ppm	ASTM D5185m	>15	**3**	2	0
Titanium	ppm	ASTM D5185m		**<1**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**24**	▲ 60	2
Lead	ppm	ASTM D5185m	>100	**0**	0	0
Copper	ppm	ASTM D5185m	>200	**1**	4	<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		**14**	5	11
Barium	ppm	ASTM D5185m		**2**	0	0
Molybdenum	ppm	ASTM D5185m		**0**	2	0
Manganese	ppm	ASTM D5185m		**7**	3	<1
Magnesium	ppm	ASTM D5185m		**9**	2	2
Calcium	ppm	ASTM D5185m		**26**	12	2
Phosphorus	ppm	ASTM D5185m		**304**	305	292
Zinc	ppm	ASTM D5185m		**126**	68	0
Sulfur	ppm	ASTM D5185m		**8980**	9127	6956

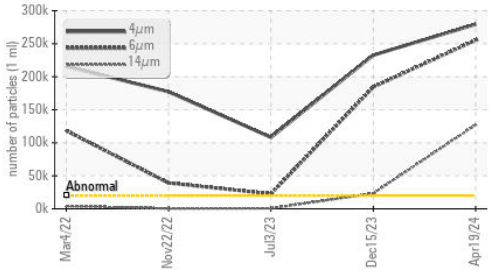
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**22**	6	2
Sodium	ppm	ASTM D5185m		**3**	0	0
Potassium	ppm	ASTM D5185m	>20	**1**	1	10

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	▲ **279391**	▲ 232708	▲ 108121
Particles >6µm		ASTM D7647	>5000	▲ **255281**	▲ 184430	▲ 22604
Particles >14µm		ASTM D7647	>640	▲ **126976**	▲ 23267	▲ 657
Particles >21µm		ASTM D7647	>160	▲ **50989**	▲ 2366	143
Particles >38µm		ASTM D7647	>40	▲ **1178**	13	2
Particles >71µm		ASTM D7647	>10	▲ **30**	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ **25/25/24**	▲ 25/25/22	▲ 24/22/17

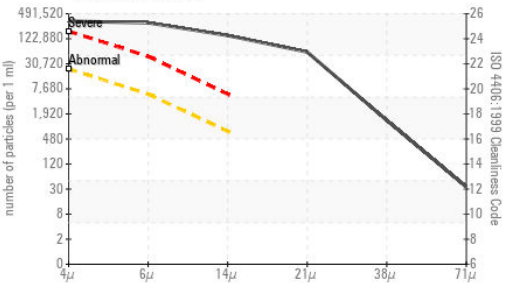
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.59**	0.58	0.95

OIL ANALYSIS REPORT

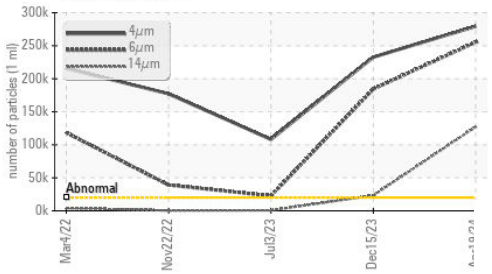
Particle Trend



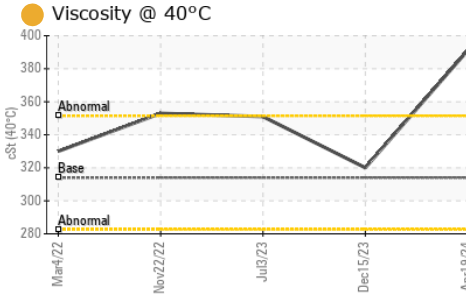
Particle Count



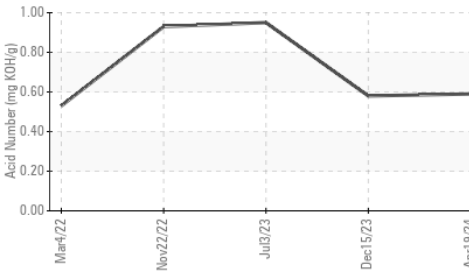
Particle Trend



Viscosity @ 40°C



Acid Number



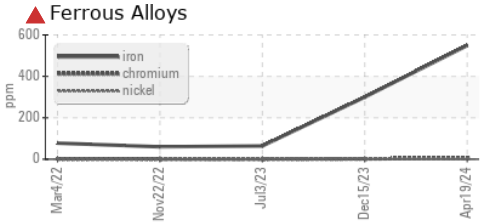
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	314	**391**	320	351

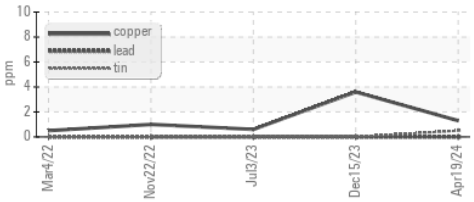
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

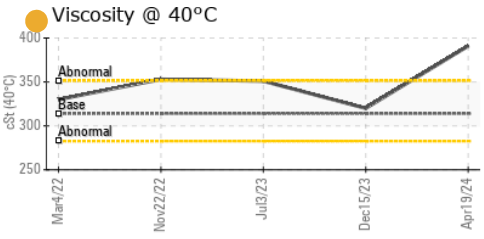
Ferrous Alloys



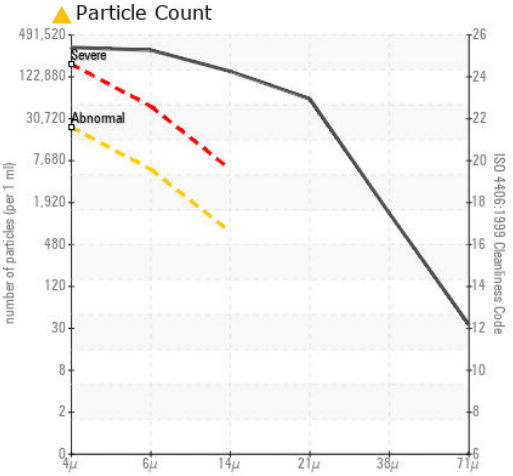
Non-ferrous Metals



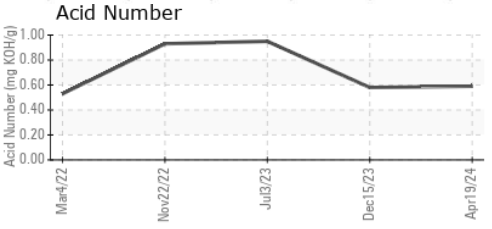
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KFS0004642 **Received** : 14 May 2024
Lab Number : 06178717 **Tested** : 17 May 2024
Unique Number : 11030043 **Diagnosed** : 17 May 2024 - Don Baldridge
Test Package : IND 2 (Additional Tests: PrtCount)

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)

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