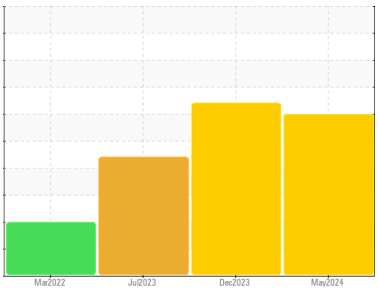
OIL ANALYSIS REPORT

Sample Rating Trend



DIRT

Area
CAST HOUSE/CRANES
Machine Id
89 WEST BRIDGE GEARBOX 1015-U89-3000
Component
Gearbox
Fluid
CITGO COMPOUND EP 320 (10 GAL)

DIAGNOSIS

Recommendation
We recommend you service the filters on this component if applicable. 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. Elemental level of silicon (Si) above normal.

Fluid Condition
The oil viscosity is lower than normal. The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**KFS0004614**	KFS0005165	KFS0003342
Sample Date		Client Info		**17 May 2024**	19 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				**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	▲ **377**	55	75
Chromium	ppm	ASTM D5185m	>15	**2**	<1	0
Nickel	ppm	ASTM D5185m	>15	**<1**	0	0
Titanium	ppm	ASTM D5185m		**<1**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	▲ **123**	▲ 33	18
Lead	ppm	ASTM D5185m	>100	**<1**	0	0
Copper	ppm	ASTM D5185m	>200	**7**	<1	<1
Tin	ppm	ASTM D5185m	>25	**0**	0	0
Antimony	ppm	ASTM D5185m	>5	**---**	---	---
Vanadium	ppm	ASTM D5185m		**0**	<1	<1
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**13**	2	4
Barium	ppm	ASTM D5185m		**3**	0	0
Molybdenum	ppm	ASTM D5185m		**4**	<1	<1
Manganese	ppm	ASTM D5185m		**7**	<1	2
Magnesium	ppm	ASTM D5185m		**24**	2	12
Calcium	ppm	ASTM D5185m		**34**	44	12
Phosphorus	ppm	ASTM D5185m		**196**	100	376
Zinc	ppm	ASTM D5185m		**52**	6	74
Sulfur	ppm	ASTM D5185m		**6276**	1255	15416

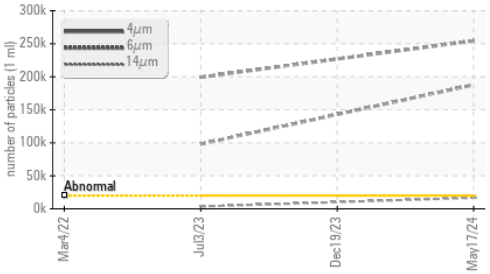
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	▲ **54**	12	3
Sodium	ppm	ASTM D5185m		**3**	29	<1
Potassium	ppm	ASTM D5185m	>20	**4**	5	0

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	▲ **254423**	---	▲ 199287
Particles >6µm		ASTM D7647	>5000	▲ **187877**	---	▲ 98028
Particles >14µm		ASTM D7647	>640	▲ **16675**	---	▲ 3496
Particles >21µm		ASTM D7647	>160	▲ **2409**	---	▲ 747
Particles >38µm		ASTM D7647	>40	▲ **51**	---	17
Particles >71µm		ASTM D7647	>10	**2**	---	1
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ **25/25/21**	---	▲ 25/24/19

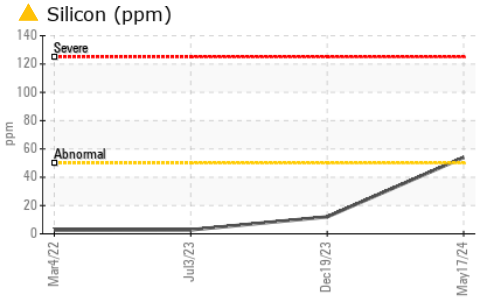
KIMBRO FLUID SOLUTIONS

OIL ANALYSIS REPORT

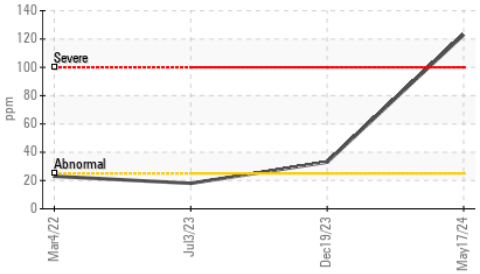
Particle Trend



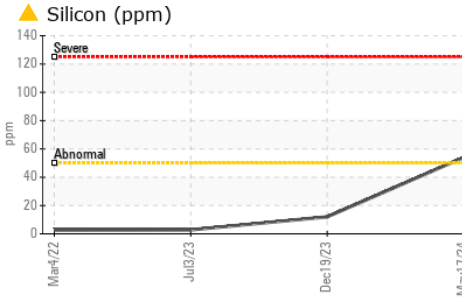
Silicon (ppm)



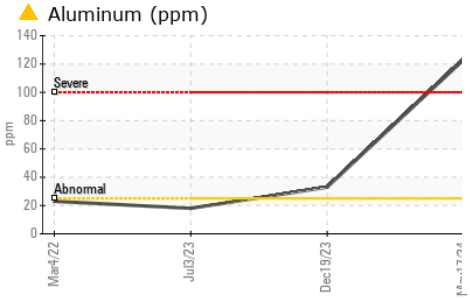
Aluminum (ppm)



Silicon (ppm)



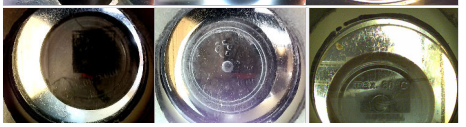
Aluminum (ppm)



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.96**	▲ 4.91	0.90

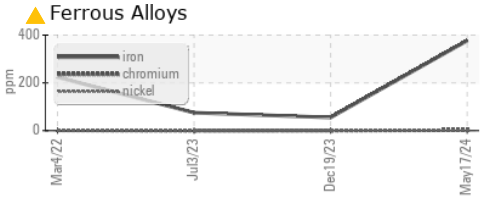
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	▲ MODER	MODER
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	▲ HEAVY	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
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	● **276**	▲ 374	327

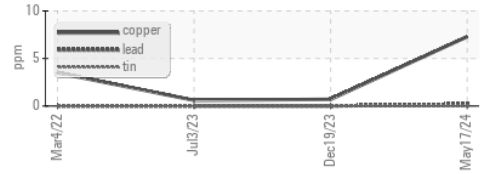
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

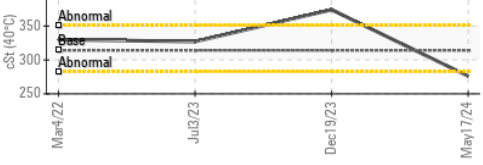
Ferrous Alloys



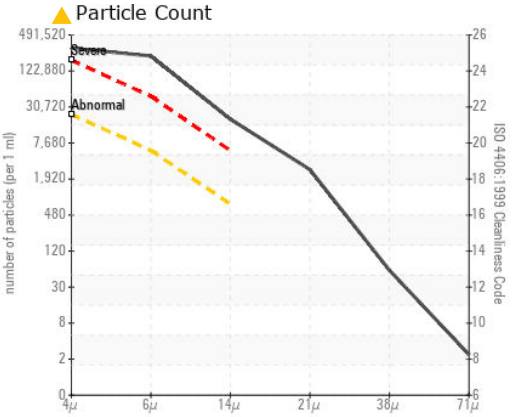
Non-ferrous Metals



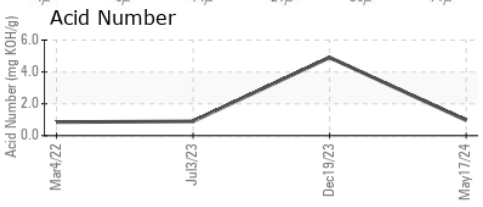
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KFS0004614
Lab Number : 06214635
Unique Number : 11087499
Test Package : IND 2 (Additional Tests: PrtCount)

Received : 19 Jun 2024
Tested : 20 Jun 2024
Diagnosed : 21 Jun 2024 - Don Baldridge

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
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MUSCLE SHOALS, AL
US 35661
Contact: Randy Nichols
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T: (256)386-6956
F:

Report Id: CONMUSAL [WUSCAR] 06214635 (Generated: 06/21/2024 14:23:46) Rev: 2

Submitted By: COLD MILL - Josh Edwards