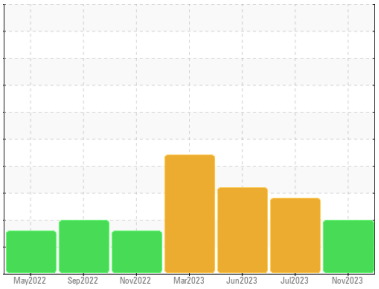
KIMBRO FLUID SOLUTIONS

PROBLEM SUMMARY

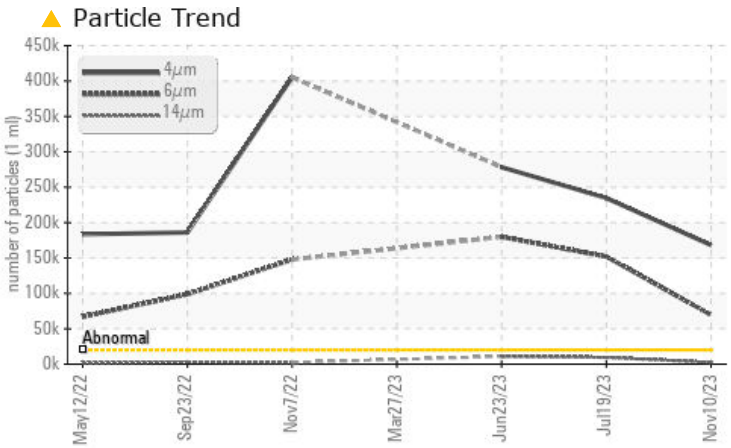
Area
HOTLINE/120 MILL
Machine Id
120 SCREWDOWN LUBE RESV 1415-014-0160
Component
Gearbox
Fluid
CITGO COMPOUND EP 320 (3000 GAL)

Sample Rating Trend



ISO

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL
Particles >4µm		ASTM D7647	>20000	▲ **168165**	▲ 234626	▲ 278340
Particles >6µm		ASTM D7647	>5000	▲ **69647**	▲ 151999	▲ 179872
Particles >14µm		ASTM D7647	>640	▲ **2371**	▲ 9491	▲ 10883
Particles >21µm		ASTM D7647	>160	▲ **280**	▲ 964	▲ 1124
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ **25/23/18**	▲ 25/24/20	▲ 25/25/21

Customer Id: CONMUSAL
Sample No.: KFS0004923
Lab Number: 06007665
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Doug Bogart +1 (800)237-1369 x4016
dougb@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
Change Filter	---	---	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.
Filter Fluid	---	---	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.

HISTORICAL DIAGNOSIS

19 Jul 2023 Diag: Angela Borella

WEAR

Check seals and/or filters for points of contaminant entry. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. Resample at the next service interval to monitor.The aluminum level is abnormal. All other 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

23 Jun 2023 Diag: Angela Borella

WEAR

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.The aluminum level is abnormal. All other component wear rates are normal. There is a high amount of particulates present in the oil. The oil viscosity is higher than normal. The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

view report

27 Mar 2023 Diag: Don Baldridge

WATER

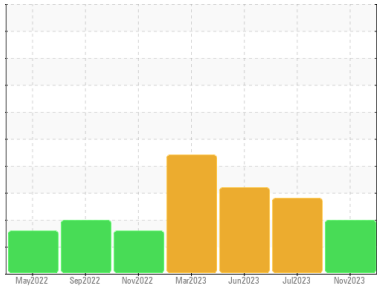
We advise that you check for the source of water entry. We advise that you follow the water drain-off procedure for this component. We recommend an early resample to monitor this condition. There is too much water present in this sample to perform a particle count.All component wear rates are normal. Appearance is milky. There is a high concentration of water present in the oil. The oil viscosity is higher than normal. The AN level is acceptable for this fluid.

view report

KIMBRO FLUID SOLUTIONS

OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Area
HOTLINE/120 MILL
Machine Id
120 SCREWDOWN LUBE RESV 1415-014-0160
Component
Gearbox
Fluid
CITGO COMPOUND EP 320 (3000 GAL)

DIAGNOSIS

▲ Recommendation

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. 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 acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**KFS0004923**	KFS0003799	KFS0003861
Sample Date		Client Info		**10 Nov 2023**	19 Jul 2023	23 Jun 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**	ABNORMAL	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	**12**	41	50
Chromium	ppm	ASTM D5185m	>15	**0**	<1	<1
Nickel	ppm	ASTM D5185m	>15	**0**	<1	<1
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**7**	▲ 30	▲ 37
Lead	ppm	ASTM D5185m	>100	**3**	2	2
Copper	ppm	ASTM D5185m	>200	**<1**	7	8
Tin	ppm	ASTM D5185m	>25	**0**	<1	<1
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

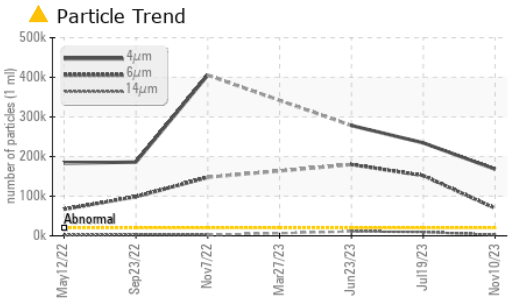
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**<1**	31	37
Barium	ppm	ASTM D5185m		**0**	2	0
Molybdenum	ppm	ASTM D5185m		**0**	0	0
Manganese	ppm	ASTM D5185m		**0**	<1	1
Magnesium	ppm	ASTM D5185m		**3**	6	4
Calcium	ppm	ASTM D5185m		**33**	598	707
Phosphorus	ppm	ASTM D5185m		**129**	108	111
Zinc	ppm	ASTM D5185m		**12**	4	0
Sulfur	ppm	ASTM D5185m		**5288**	4887	7204

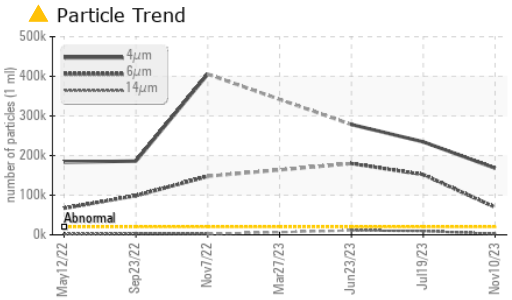
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**<1**	2	<1
Sodium	ppm	ASTM D5185m		**1**	6	6
Potassium	ppm	ASTM D5185m	>20	**2**	3	4

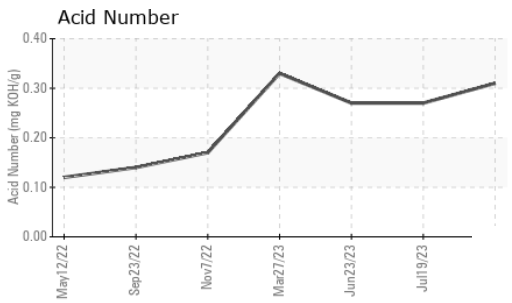
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	▲ **168165**	▲ 234626	▲ 278340
Particles >6µm		ASTM D7647	>5000	▲ **69647**	▲ 151999	▲ 179872
Particles >14µm		ASTM D7647	>640	▲ **2371**	▲ 9491	▲ 10883
Particles >21µm		ASTM D7647	>160	▲ **280**	▲ 964	▲ 1124
Particles >38µm		ASTM D7647	>40	**4**	8	4
Particles >71µm		ASTM D7647	>10	**0**	2	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ **25/23/18**	▲ 25/24/20	▲ 25/25/21

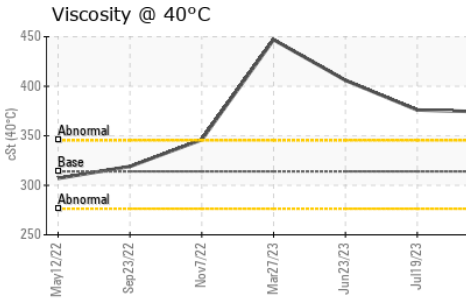
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.31**	0.27	0.27

OIL ANALYSIS REPORT



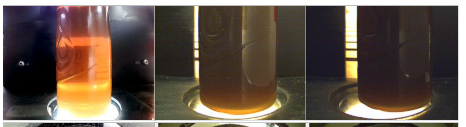
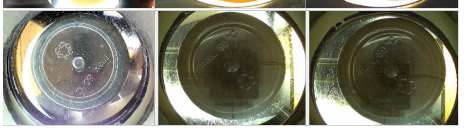




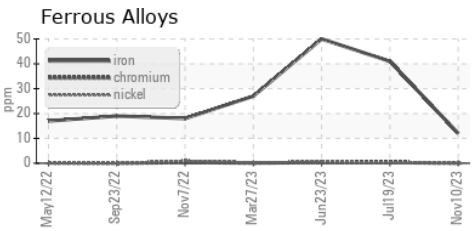


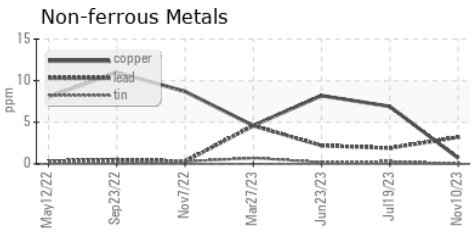
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

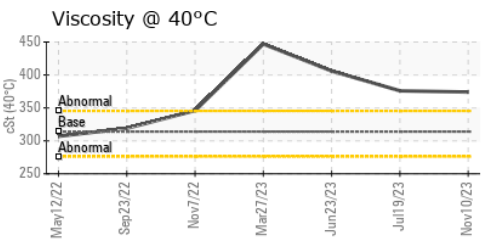
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	314	**374**	376	▲ 406

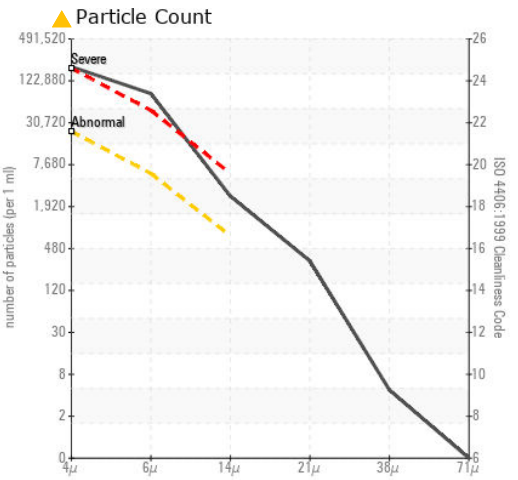
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

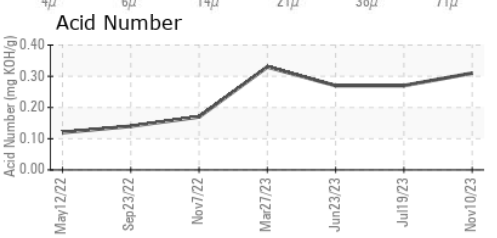
GRAPHS











Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KFS0004923 **Received** : 14 Nov 2023
Lab Number : 06007665 **Diagnosed** : 04 Dec 2023
Unique Number : 10741427 **Diagnostician** : Doug Bogart
Test Package : IND 2 (Additional Tests: PrtCount)

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: Joel Even
joel.even@constellium.com
T: (256)740-7490
F: