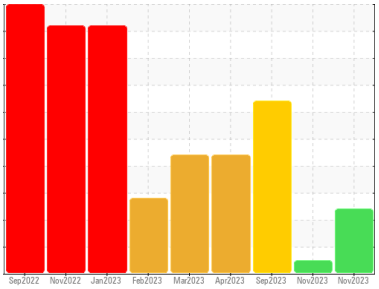
KIMBRO FLUID SOLUTIONS

PROBLEM SUMMARY

Sample Rating Trend

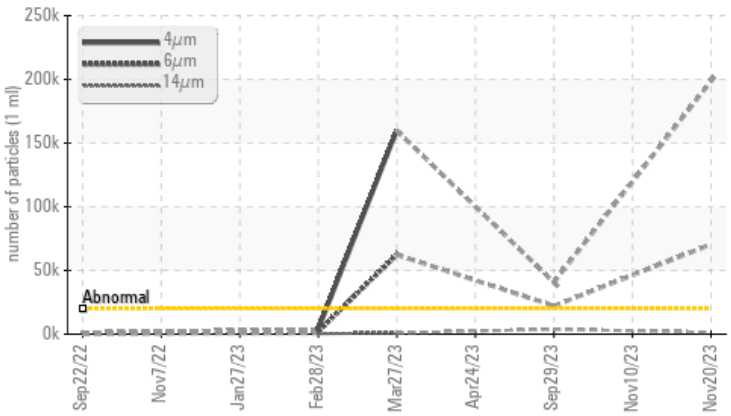


VISCOSITY

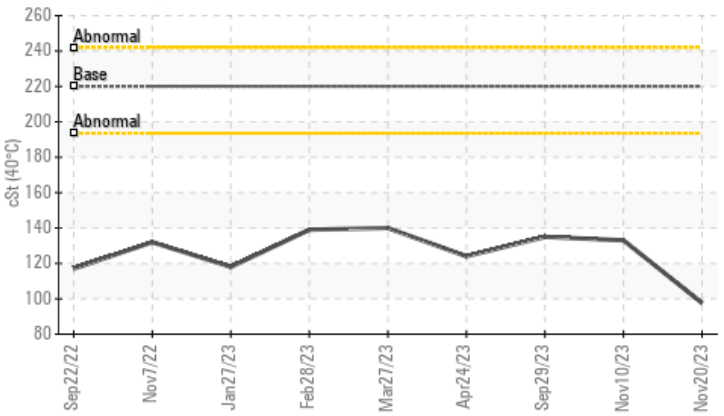
Area
HOTLINE/120 MILL
Machine Id
120 TRIMMER 1415-003-0020
Component
Gearbox
Fluid
PETRO CANADA ENDURATEX EP 220 (700 GAL)

COMPONENT CONDITION SUMMARY

▲ Particle Trend



▲ Viscosity @ 40°C



RECOMMENDATION

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

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	---	SEVERE
Particles >4µm		ASTM D7647	>20000	▲ **198519**	---	▲ 40610
Particles >6µm		ASTM D7647	>5000	▲ **70466**	---	▲ 22123
Particles >14µm		ASTM D7647	>640	▲ **1475**	---	▲ 3765
Particles >21µm		ASTM D7647	>160	▲ **170**	---	▲ 1268
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ **25/23/18**	---	▲ 23/22/19
Visc @ 40°C	cSt	ASTM D445	220	▲ **97.6**	133	▲ 135

Customer Id: CONMUSAL
Sample No.: KFS0005193
Lab Number: 06015768
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@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 recommend you service the filters on this component if applicable.

HISTORICAL DIAGNOSIS

10 Nov 2023 Diag:

UNKNOWN

view report

29 Sep 2023 Diag: Jonathan Hester

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, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition.All component wear rates are normal. There is a high amount of particulates present in the oil. There is a high concentration of water present in the oil. The oil viscosity is lower than normal. Confirm oil type. The AN level is acceptable for this fluid.

view report

24 Apr 2023 Diag: Doug Bogart

WATER

We advise that you check for the source of water entry. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. 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.The aluminum level is abnormal. Appearance is milky. There is a high amount of visible silt present in the sample. There is a moderate concentration of water present in the oil. The oil viscosity is lower than normal. Confirm oil type. The AN level is acceptable for this fluid.

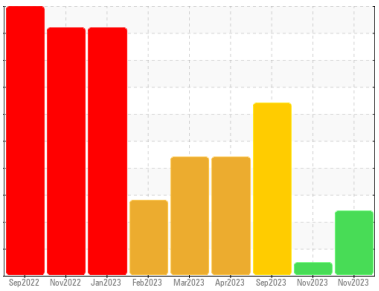
view report

KIMBRO FLUID SOLUTIONS

OIL ANALYSIS REPORT

Area
HOTLINE/120 MILL
Machine Id
120 TRIMMER 1415-003-0020
Component
Gearbox
Fluid
PETRO CANADA ENDURATEX EP 220 (700 GAL)

Sample Rating Trend



VISCOSITY

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
Viscosity of sample indicates oil is within ISO 100 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**KFS0005193**	KFS0004819	KFS0004888
Sample Date		Client Info		**20 Nov 2023**	10 Nov 2023	29 Sep 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

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	**11**	13	12
Chromium	ppm	ASTM D5185m	>15	**0**	0	<1
Nickel	ppm	ASTM D5185m	>15	**0**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**9**	▲ 32	24
Lead	ppm	ASTM D5185m	>100	**0**	1	0
Copper	ppm	ASTM D5185m	>200	**<1**	1	<1
Tin	ppm	ASTM D5185m	>25	**0**	0	<1
Vanadium	ppm	ASTM D5185m		**<1**	0	<1
Cadmium	ppm	ASTM D5185m		**0**	2	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	60	**0**	0	0
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	0	**0**	0	0
Manganese	ppm	ASTM D5185m	0	**<1**	0	<1
Magnesium	ppm	ASTM D5185m	0	**0**	2	1
Calcium	ppm	ASTM D5185m	0	**13**	23	18
Phosphorus	ppm	ASTM D5185m	270	**288**	312	276
Zinc	ppm	ASTM D5185m	0	**401**	▲ 381	372
Sulfur	ppm	ASTM D5185m	11200	**788**	▲ 808	890

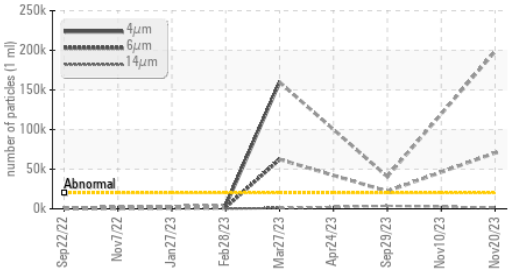
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**<1**	0	1
Sodium	ppm	ASTM D5185m		**<1**	0	5
Potassium	ppm	ASTM D5185m	>20	**<1**	2	<1

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	▲ **198519**	---	▲ 40610
Particles >6µm		ASTM D7647	>5000	▲ **70466**	---	▲ 22123
Particles >14µm		ASTM D7647	>640	▲ **1475**	---	▲ 3765
Particles >21µm		ASTM D7647	>160	▲ **170**	---	▲ 1268
Particles >38µm		ASTM D7647	>40	**1**	---	▲ 196
Particles >71µm		ASTM D7647	>10	**0**	---	▲ 20
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ **25/23/18**	---	▲ 23/22/19

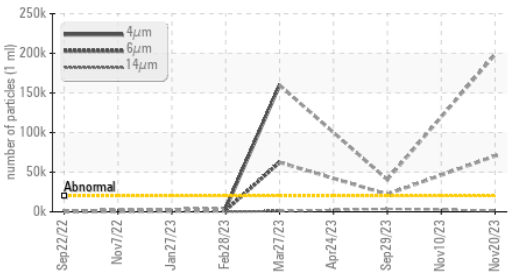
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.40	**0.46**	0.65	0.70

OIL ANALYSIS REPORT

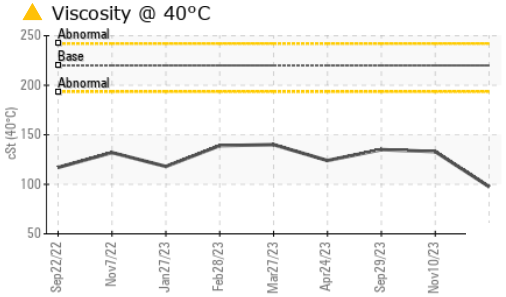
Particle Trend



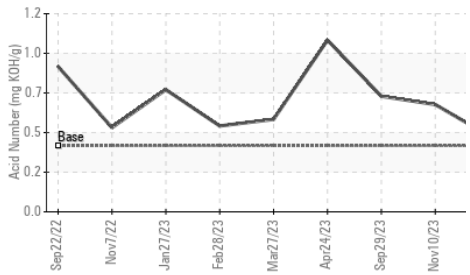
Particle Trend



Viscosity @ 40°C



Acid Number



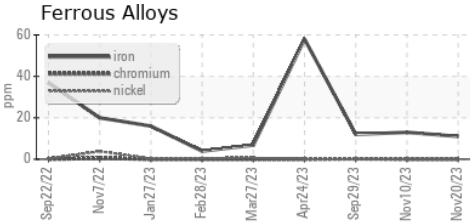
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	220	▲ **97.6**	133	▲ 135

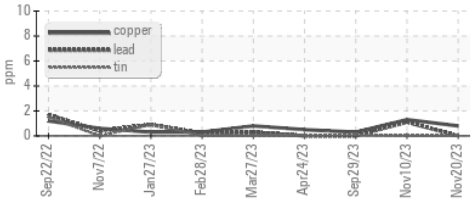
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

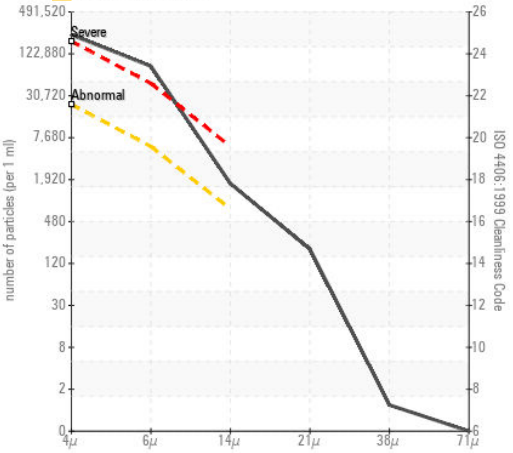
Ferrous Alloys



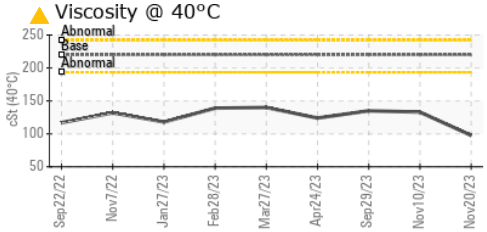
Non-ferrous Metals



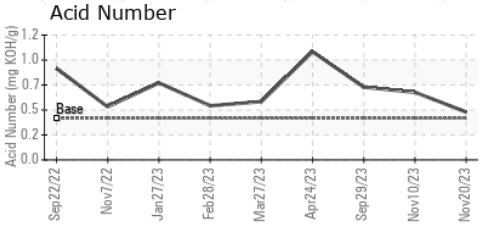
Particle Count



Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KFS0005193 **Received** : 22 Nov 2023
Lab Number : 06015768 **Diagnosed** : 30 Nov 2023
Unique Number : 10754912 **Diagnostician** : Jonathan Hester
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: