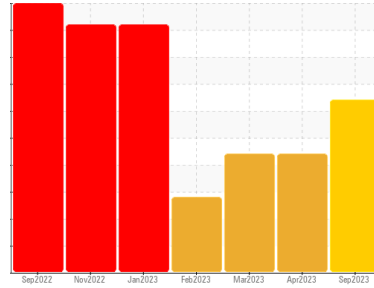




PROBLEM SUMMARY

Sample Rating Trend

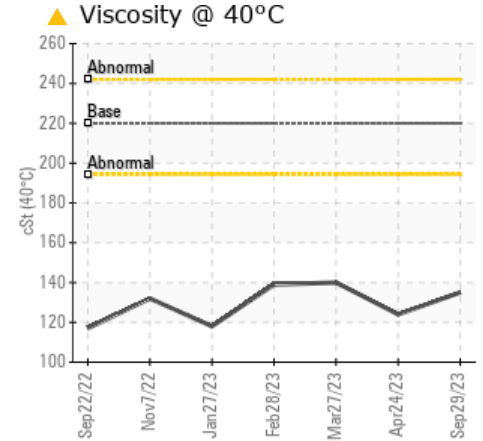
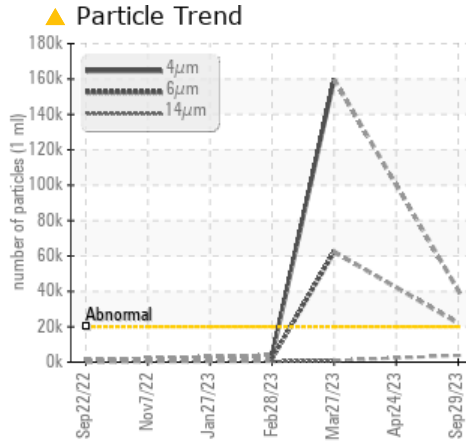
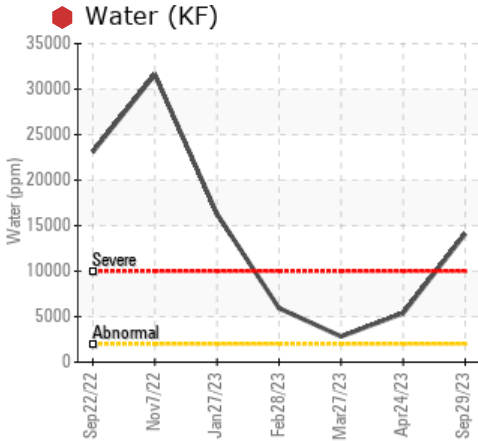


WATER



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

COMPONENT CONDITION SUMMARY



RECOMMENDATION

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.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	ABNORMAL	ABNORMAL
Water	%	ASTM D6304	>0.2	1.41	0.538	0.282
ppm Water	ppm	ASTM D6304	>2000	14100	5380	2820
Particles >4µm		ASTM D7647	>20000	40610	---	159758
Particles >6µm		ASTM D7647	>5000	22123	---	62357
Particles >14µm		ASTM D7647	>640	3765	---	908
Particles >21µm		ASTM D7647	>160	1268	---	43
Particles >38µm		ASTM D7647	>40	196	---	1
Particles >71µm		ASTM D7647	>10	20	---	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	23/22/19	---	24/23/17
Emulsified Water	scalar	*Visual	>0.2	0.2%	0.2%	0.2%
Visc @ 40°C	cSt	ASTM D445	220	135	124	140

Customer Id: CONMUSAL
 Sample No.: KFS0004888
 Lab Number: 05967762
 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
Water Drain-off	---	---	?	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.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Water Access	---	---	?	We advise that you check for the source of water entry.

HISTORICAL DIAGNOSIS

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



27 Mar 2023 Diag: Don Baldrige

WATER



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. Appearance is hazy. There is a high amount of particulates present in the oil. There is a light 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



28 Feb 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. Resample at the next service interval to monitor. All component wear rates are normal. Appearance is hazy. There is a moderate concentration of water present in the oil. The amount and size of particulates present in the system are acceptable. The oil viscosity is lower than normal. Confirm oil type. The AN level is acceptable for this fluid.

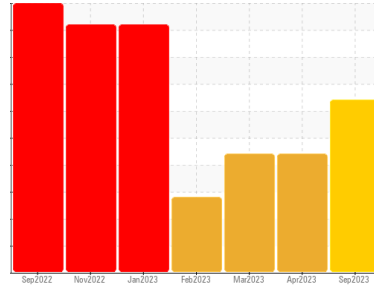
view report





OIL ANALYSIS REPORT

Sample Rating Trend



WATER



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

DIAGNOSIS

Recommendation

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.

Wear

All component wear rates are normal.

Contamination

There is a high amount of particulates present in the oil. There is a high concentration of water present in the oil.

Fluid Condition

The oil viscosity is lower than normal. Confirm oil type. The AN level is acceptable for this fluid.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		KFS0004888	KFS0003767	KFS0003705
Sample Date	Client Info		29 Sep 2023	24 Apr 2023	27 Mar 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	ABNORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >200	12	58	7
Chromium	ppm	ASTM D5185m >15	<1	0	0
Nickel	ppm	ASTM D5185m >15	0	0	<1
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >25	24	▲ 88	10
Lead	ppm	ASTM D5185m >100	0	0	<1
Copper	ppm	ASTM D5185m >200	<1	<1	<1
Tin	ppm	ASTM D5185m >25	<1	0	0
Vanadium	ppm	ASTM D5185m	<1	0	<1
Cadmium	ppm	ASTM D5185m	<1	0	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	<1	0
Manganese	ppm	ASTM D5185m 0	<1	<1	<1
Magnesium	ppm	ASTM D5185m 0	1	<1	<1
Calcium	ppm	ASTM D5185m 0	18	13	29
Phosphorus	ppm	ASTM D5185m 270	276	337	294
Zinc	ppm	ASTM D5185m 0	372	390	377
Sulfur	ppm	ASTM D5185m 11200	890	522	901

CONTAMINANTS

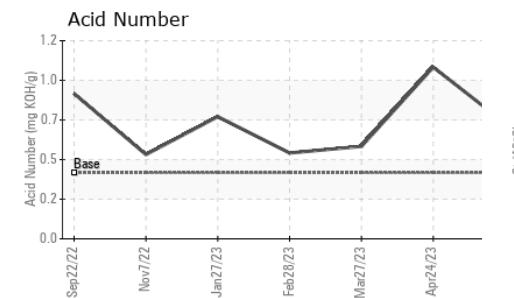
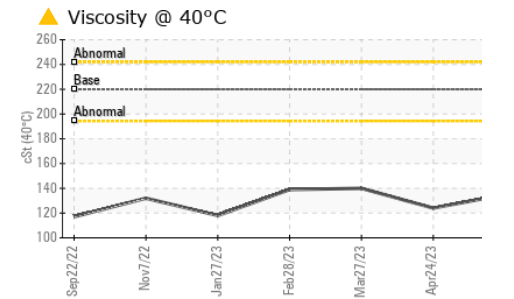
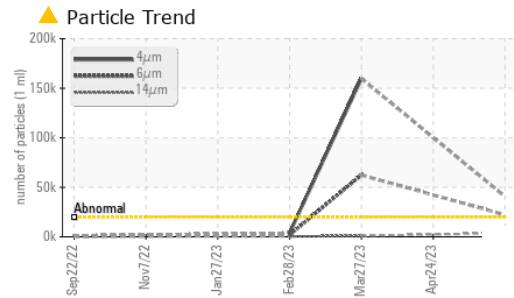
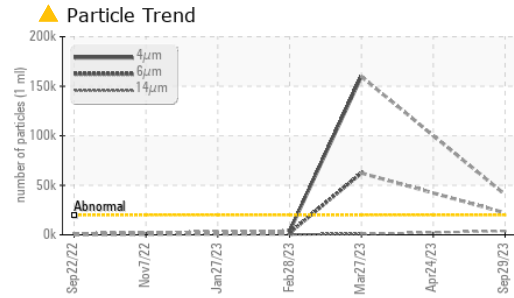
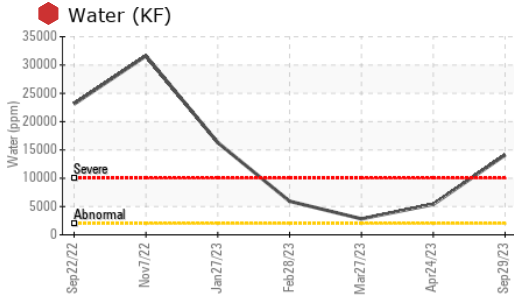
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	1	<1	<1
Sodium	ppm	ASTM D5185m	5	<1	1
Potassium	ppm	ASTM D5185m >20	<1	2	1
Water	%	ASTM D6304 >0.2	● 1.41	▲ 0.538	▲ 0.282
ppm Water	ppm	ASTM D6304 >2000	● 14100	▲ 5380	▲ 2820

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	▲ 40610	---	▲ 159758
Particles >6µm	ASTM D7647	>5000	▲ 22123	---	▲ 62357
Particles >14µm	ASTM D7647	>640	▲ 3765	---	▲ 908
Particles >21µm	ASTM D7647	>160	▲ 1268	---	43
Particles >38µm	ASTM D7647	>40	▲ 196	---	1
Particles >71µm	ASTM D7647	>10	▲ 20	---	0
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ 23/22/19	---	▲ 24/23/17

FLUID DEGRADATION

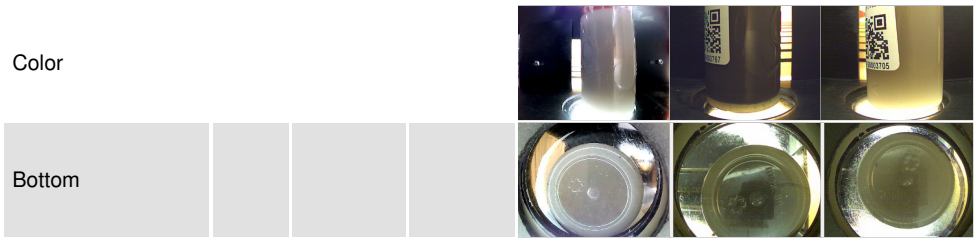
	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.40	0.70	1.04	0.56



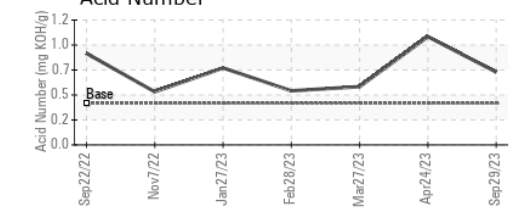
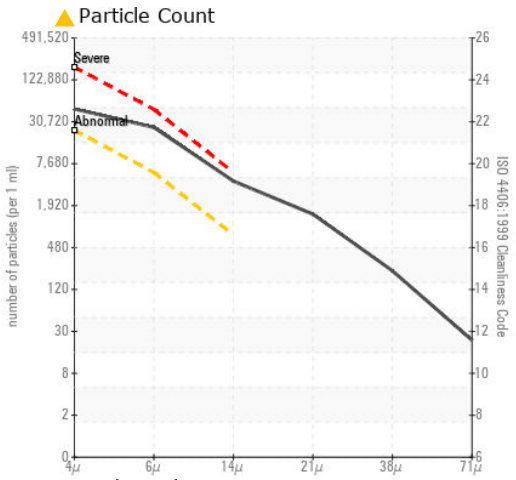
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	▲ HEAVY	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	▲ MILKY	▲ HAZY
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	● 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	▲ 135	▲ 124

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KFS0004888 **Received** : 03 Oct 2023
Lab Number : 05967762 **Diagnosed** : 10 Oct 2023
Unique Number : 10674313 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: KF, PrtCount)

CONSTELLIUM
 4805 SECOND STREET
 MUSCLE SHOALS, AL
 US 35661
 Contact: Joel Even
 joel.even@constellium.com
 T: (256)740-7490
 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)