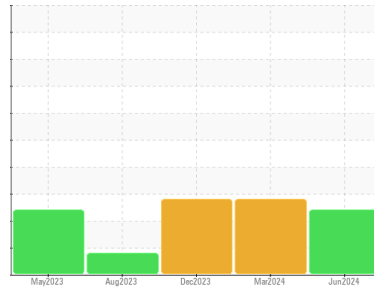




OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Area

ROLL SHOP

Machine Id

64 Herkules Headstock Gearbox 8100-011-0002

Component

Gearbox

Fluid

PETRO CANADA ENDURATEX SYNTHETIC EP 150 (--- GAL)

DIAGNOSIS

Recommendation

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

Wear

Gear wear is indicated.

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 suitable for further service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	KFS0004443	KFS0004861	KFS0005226
Sample Date	Client Info	04 Jun 2024	26 Mar 2024	19 Dec 2023
Machine Age	hrs	0	0	0
Oil Age	hrs	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	▲ 258	▲ 231	▲ 220
Chromium	ppm ASTM D5185m >15	<1	<1	<1
Nickel	ppm ASTM D5185m >15	<1	2	<1
Titanium	ppm ASTM D5185m	<1	<1	<1
Silver	ppm ASTM D5185m	0	0	0
Aluminum	ppm ASTM D5185m >25	2	1	<1
Lead	ppm ASTM D5185m >100	<1	<1	0
Copper	ppm ASTM D5185m >200	30	25	23
Tin	ppm ASTM D5185m >25	3	4	2
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 33	6	5	6
Barium	ppm ASTM D5185m 5	0	0	0
Molybdenum	ppm ASTM D5185m	0	0	0
Manganese	ppm ASTM D5185m	3	4	4
Magnesium	ppm ASTM D5185m 5	<1	2	0
Calcium	ppm ASTM D5185m 5	0	5	7
Phosphorus	ppm ASTM D5185m 437	331	322	346
Zinc	ppm ASTM D5185m 5	14	14	11
Sulfur	ppm ASTM D5185m 5000	4803	6224	5131

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >50	1	<1	1
Sodium	ppm ASTM D5185m	11	22	10
Potassium	ppm ASTM D5185m >20	4	5	4

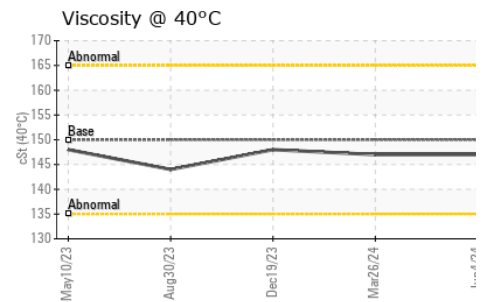
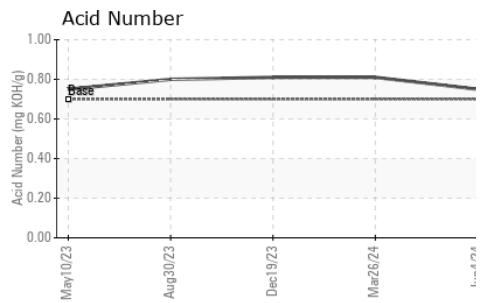
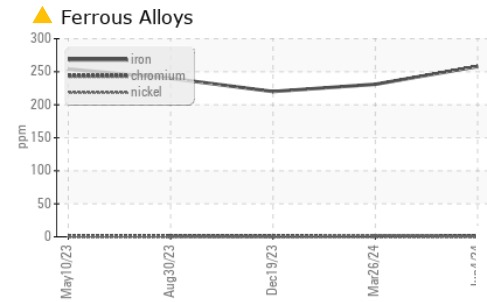
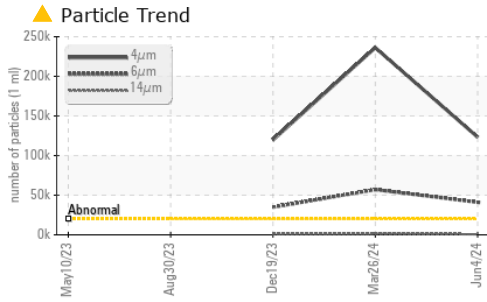
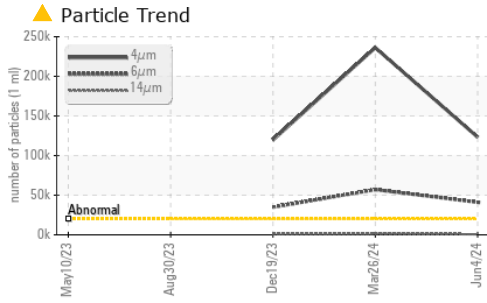
FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >20000	▲ 123238	▲ 236178	▲ 119681
Particles >6µm	ASTM D7647 >5000	▲ 41058	▲ 57048	▲ 34813
Particles >14µm	ASTM D7647 >640	▲ 658	▲ 1191	▲ 1075
Particles >21µm	ASTM D7647 >160	97	▲ 162	▲ 215
Particles >38µm	ASTM D7647 >40	8	7	10
Particles >71µm	ASTM D7647 >10	2	2	2
Oil Cleanliness	ISO 4406 (c) >21/19/16	▲ 24/23/17	▲ 25/23/17	▲ 24/22/17

FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D8045 0.7	0.75	0.81	0.81

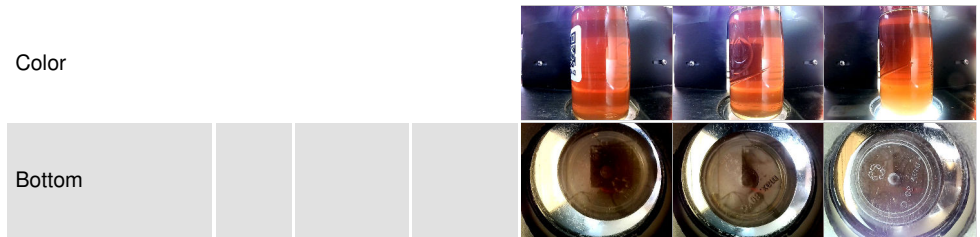
OIL ANALYSIS REPORT



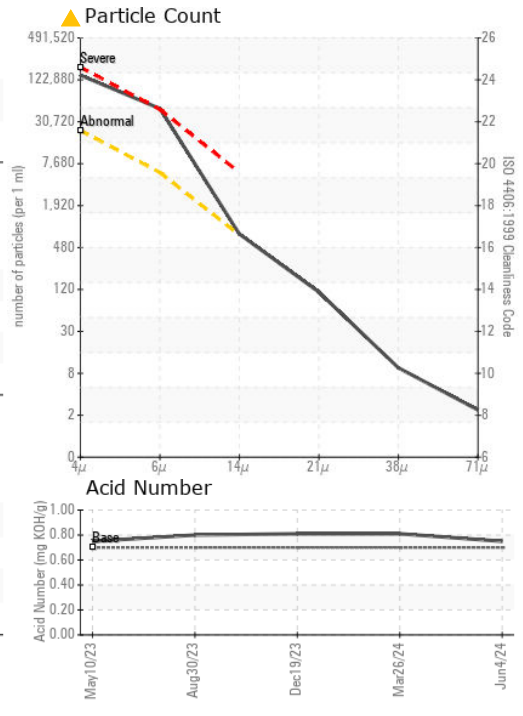
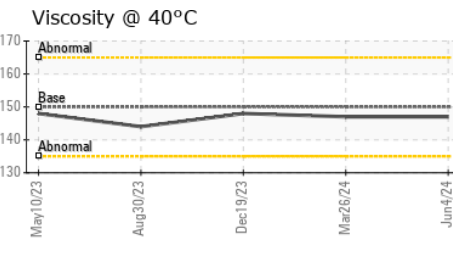
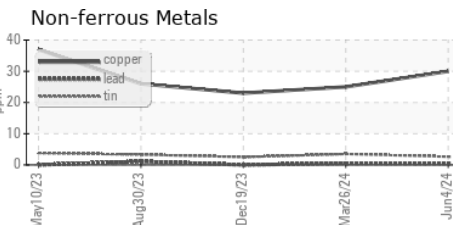
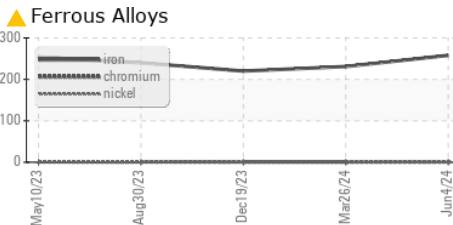
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	150	147	148

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KFS0004443
Lab Number : 06214643
Unique Number : 11087507
Test Package : IND 2 (Additional Tests: PrtCount)

CONSTELLIUM
 4805 SECOND STREET
 MUSCLE SHOALS, AL
 US 35661

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)

Contact: Randy Nichols
 randall.nichols@constellium.com
 T: (256)386-6956
 F: