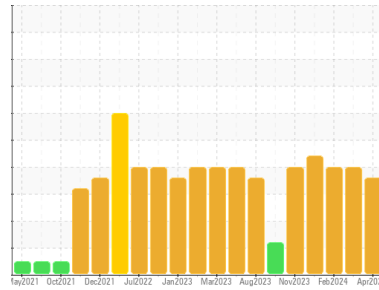




PROBLEM SUMMARY

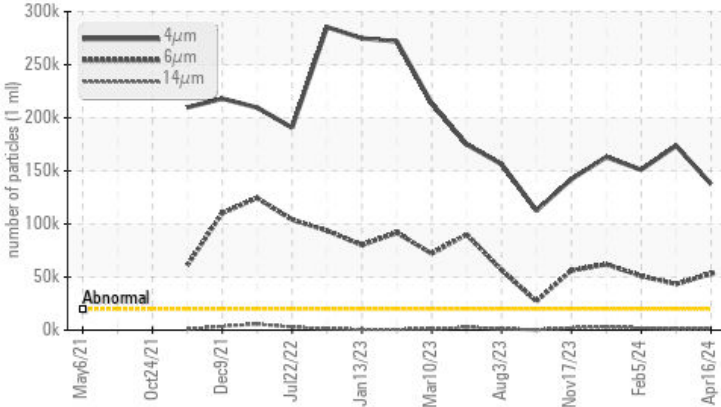
Area
COLD MILL/CM-3STD-1S
 Machine Id
SOUTH 3-STAND REWIND GEARBOX 1526-007-7540
 Component
Gearbox
 Fluid
PETRO CANADA ENDURATEX EP 460 (100 GAL)

Sample Rating Trend



COMPONENT CONDITION SUMMARY

▲ Particle Trend



RECOMMENDATION

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation.

PROBLEMATIC TEST RESULTS

Sample Status			SEVERE	SEVERE	SEVERE
Particles >4µm	ASTM D7647	>20000	▲ 137609	▲ 173703	▲ 151035
Particles >6µm	ASTM D7647	>5000	▲ 53153	▲ 43353	▲ 50998
Particles >14µm	ASTM D7647	>640	▲ 1453	● 1144	▲ 1989
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ 24/23/18	▲ 25/23/17	▲ 24/23/18

Customer Id: CONMUSAL
 Sample No.: KFS0004478
 Lab Number: 06153062
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca


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.
Resample	---	---	?	Resample in 30-45 days to monitor this situation.
Check Breathers	---	---	?	The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather.
Check Seals	---	---	?	Check seals and/or filters for points of contaminant entry.


HISTORICAL DIAGNOSIS

ISO




29 Feb 2024 Diag: Wes Davis
 Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report




ISO




05 Feb 2024 Diag: Wes Davis
 Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report




ISO



05 Jan 2024 Diag: Wes Davis
 We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation. All component wear rates are normal. There is a high amount of particulates (2 to 100 microns in size) present in the oil. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

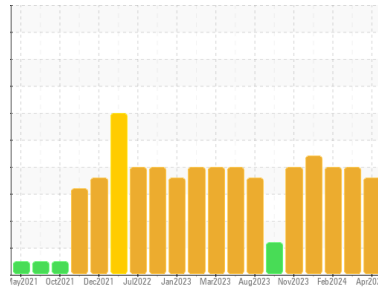
view report





OIL ANALYSIS REPORT

Sample Rating Trend



Area
COLD MILL/CM-3STD-1S
 Machine Id
SOUTH 3-STAND REWIND GEARBOX 1526-007-7540
 Component
Gearbox
 Fluid
PETRO CANADA ENDURATEX EP 460 (100 GAL)

DIAGNOSIS

Recommendation

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation.

Wear

All component wear rates are normal.

Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		KFS0004478	KFS0004665	KFS0004672
Sample Date	Client Info		16 Apr 2024	29 Feb 2024	05 Feb 2024
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	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	9	7	4
Chromium	ppm	ASTM D5185m	>15	0	0	0
Nickel	ppm	ASTM D5185m	>15	<1	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	<1	0	0
Lead	ppm	ASTM D5185m	>100	<1	0	0
Copper	ppm	ASTM D5185m	>200	<1	0	0
Tin	ppm	ASTM D5185m	>25	<1	0	0
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	55	36	30	34
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	0	0	0	0
Manganese	ppm	ASTM D5185m	0	<1	0	0
Magnesium	ppm	ASTM D5185m	2	1	0	0
Calcium	ppm	ASTM D5185m	6	1	0	0
Phosphorus	ppm	ASTM D5185m	240	209	195	172
Zinc	ppm	ASTM D5185m	3	0	0	0
Sulfur	ppm	ASTM D5185m	10310	8735	7051	7149

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>50	8	8	7
Sodium	ppm	ASTM D5185m		2	0	<1
Potassium	ppm	ASTM D5185m	>20	3	0	0

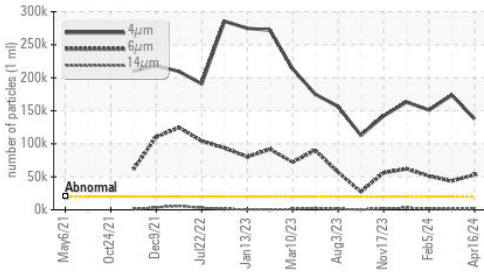
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	▲ 137609	▲ 173703	▲ 151035
Particles >6µm	ASTM D7647	>5000	▲ 53153	▲ 43353	▲ 50998
Particles >14µm	ASTM D7647	>640	▲ 1453	● 1144	▲ 1989
Particles >21µm	ASTM D7647	>160	151	137	● 268
Particles >38µm	ASTM D7647	>40	1	1	1
Particles >71µm	ASTM D7647	>10	0	0	0
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ 24/23/18	▲ 25/23/17	▲ 24/23/18

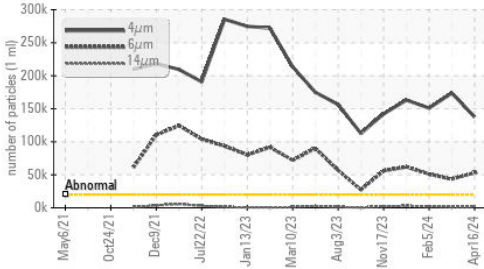
FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	0.5	0.53	0.60	0.47

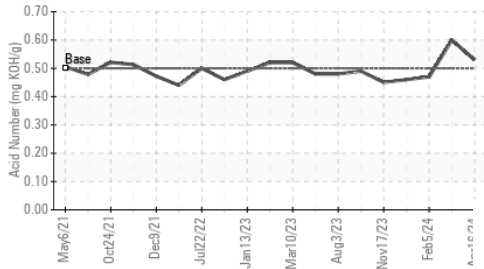
▲ Particle Trend



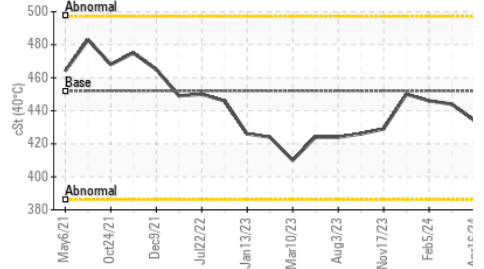
▲ Particle Trend



Acid Number



Viscosity @ 40°C



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	NONE
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	452	434	444

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color

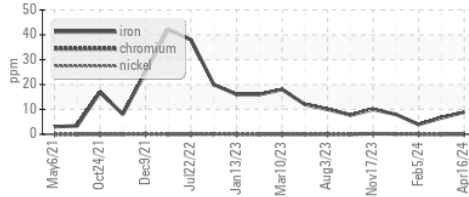


Bottom

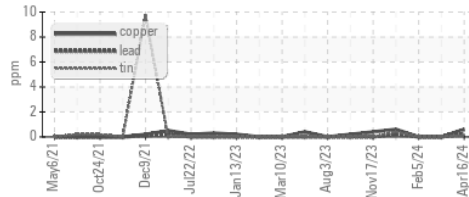


GRAPHS

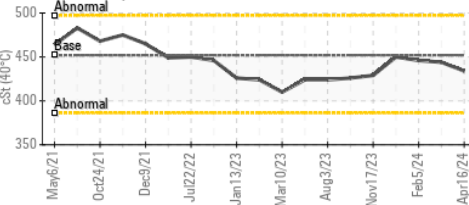
Ferrous Alloys



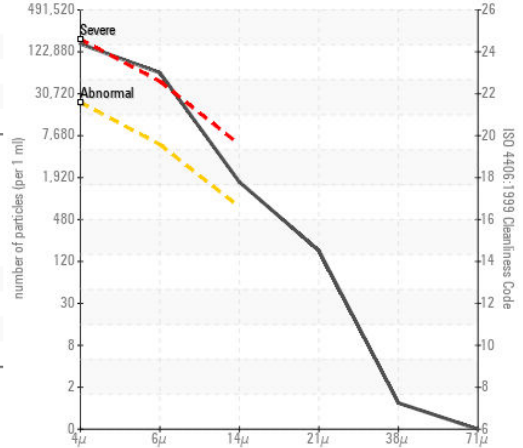
Non-ferrous Metals



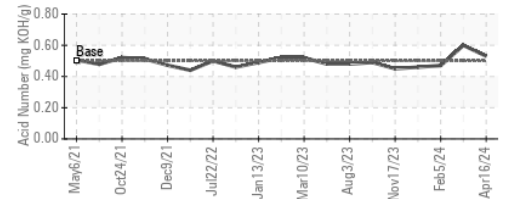
Viscosity @ 40°C



▲ Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : KFS0004478

Lab Number : 06153062

Unique Number : 10983140

Test Package : IND 2 (Additional Tests: PrtCount)

Received : 18 Apr 2024

Tested : 19 Apr 2024

Diagnosed : 19 Apr 2024 - Wes Davis

CONSTELLIUM

4805 SECOND STREET

MUSCLE SHOALS, AL

US 35661

Contact: Randy Nichols

randall.nichols@constellium.com

T: (256)386-6956

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)