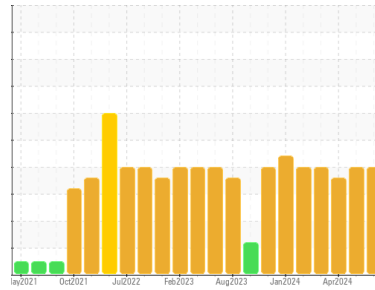




# PROBLEM SUMMARY

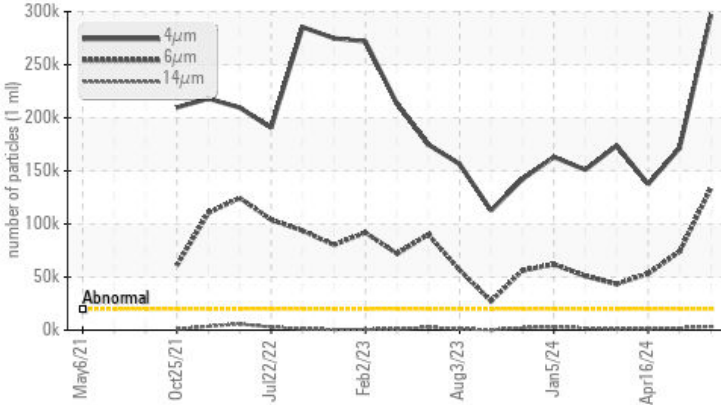
Area  
**COLD MILL/CM-3STD-1S**  
 Machine Id  
**SOUTH 3-STAND REWIND GEARBOX 1526-007-7540**  
 Component  
**Gearbox**  
 Fluid  
**PETRO CANADA ENDURATEX EP 460 (100 GAL)**

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	▲ 296856	▲ 171399	▲ 137609
Particles >6µm	ASTM D7647	>5000	▲ 134015	▲ 73957	▲ 53153
Particles >14µm	ASTM D7647	>640	▲ 3112	▲ 1929	▲ 1453
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ 25/24/19	▲ 25/23/18	▲ 24/23/18

Customer Id: CONMUSAL  
 Sample No.: KFS0004852  
 Lab Number: 06211583  
 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](mailto:wesd@wearcheck.ca)


To change component or sample information:  
 Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto: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




**16 May 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




**16 Apr 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



**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.

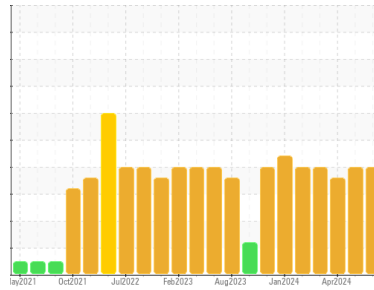
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



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		<b>KFS0004852</b>	KFS0004441	KFS0004478
Sample Date	Client Info		<b>13 Jun 2024</b>	16 May 2024	16 Apr 2024
Machine Age	hrs	Client Info	<b>0</b>	0	0
Oil Age	hrs	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>SEVERE</b>	SEVERE	SEVERE

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>200	<b>25</b>	16	9
Chromium	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>2</b>	0	<1
Lead	ppm	ASTM D5185m	>100	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m	>200	<b>&lt;1</b>	0	<1
Tin	ppm	ASTM D5185m	>25	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	55	<b>32</b>	34	36
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0	<b>&lt;1</b>	0	0
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m	2	<b>&lt;1</b>	<1	1
Calcium	ppm	ASTM D5185m	6	<b>0</b>	<1	1
Phosphorus	ppm	ASTM D5185m	240	<b>226</b>	205	209
Zinc	ppm	ASTM D5185m	3	<b>2</b>	<1	0
Sulfur	ppm	ASTM D5185m	10310	<b>8451</b>	8372	8735

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>50	<b>9</b>	8	8
Sodium	ppm	ASTM D5185m		<b>1</b>	0	2
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	3

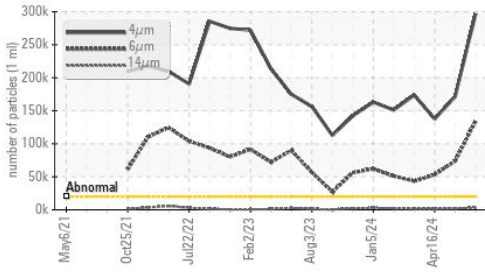
## FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	<b>▲ 296856</b>	▲ 171399	▲ 137609
Particles >6µm	ASTM D7647	>5000	<b>▲ 134015</b>	▲ 73957	▲ 53153
Particles >14µm	ASTM D7647	>640	<b>▲ 3112</b>	▲ 1929	▲ 1453
Particles >21µm	ASTM D7647	>160	<b>211</b>	205	151
Particles >38µm	ASTM D7647	>40	<b>1</b>	2	1
Particles >71µm	ASTM D7647	>10	<b>1</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>21/19/16	<b>▲ 25/24/19</b>	▲ 25/23/18	▲ 24/23/18

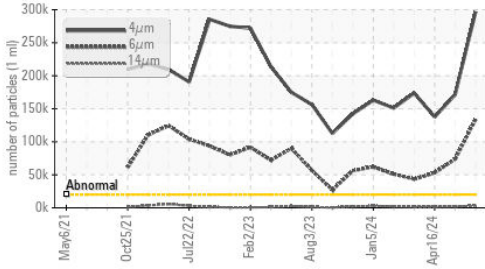
## FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	0.5	<b>0.49</b>	0.48	0.53

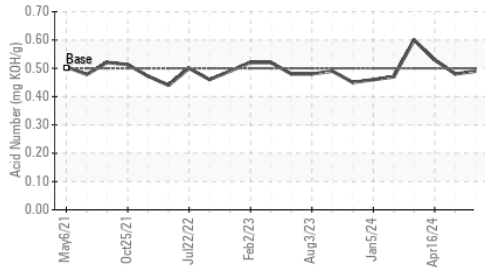
### ▲ Particle Trend



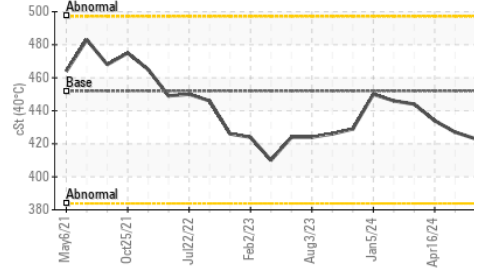
### ▲ Particle Trend



### 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	423	427

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color

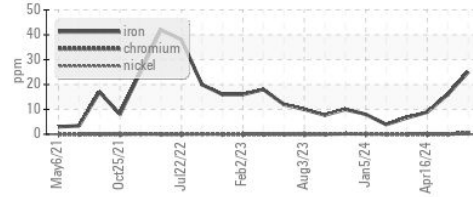


Bottom

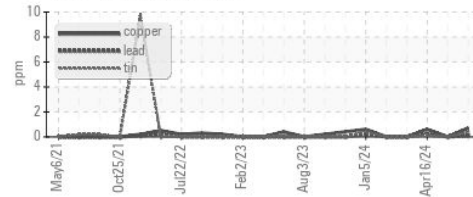


### GRAPHS

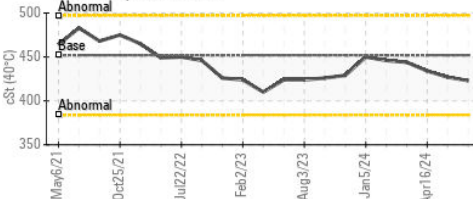
#### Ferrous Alloys



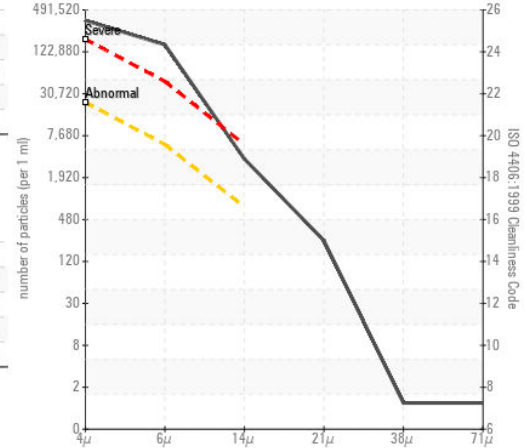
#### Non-ferrous Metals



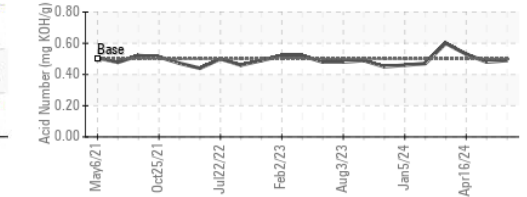
#### Viscosity @ 40°C



#### ▲ Particle Count



#### Acid Number



Certificate L2367

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

**Sample No.** : KFS0004852

**Lab Number** : 06211583

**Unique Number** : 11084447

**Test Package** : IND 2 ( Additional Tests: PrtCount )

**Received** : 17 Jun 2024

**Tested** : 18 Jun 2024

**Diagnosed** : 18 Jun 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)