

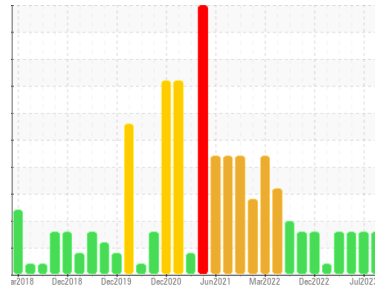


# PROBLEM SUMMARY

Area  
**SOUTH KETTLE ROOM**  
 Machine Id  
**B46483 - KETTLE 9**

Component  
**Gearbox**  
 Fluid  
**PETRO CANADA ENDURATEX SYNTHETIC EP 220 (3 GAL)**

Sample Rating Trend

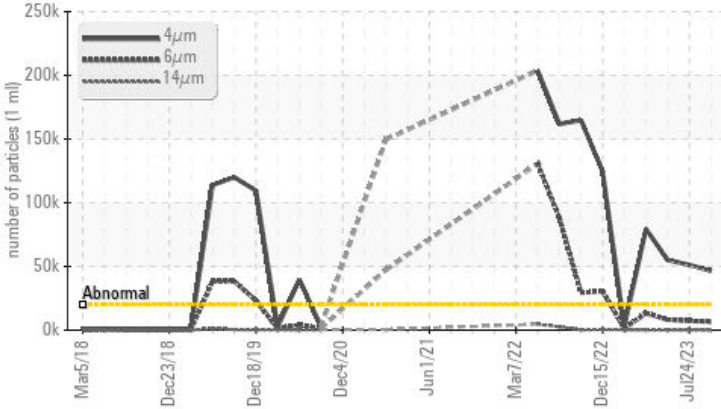


## VISCOSITY

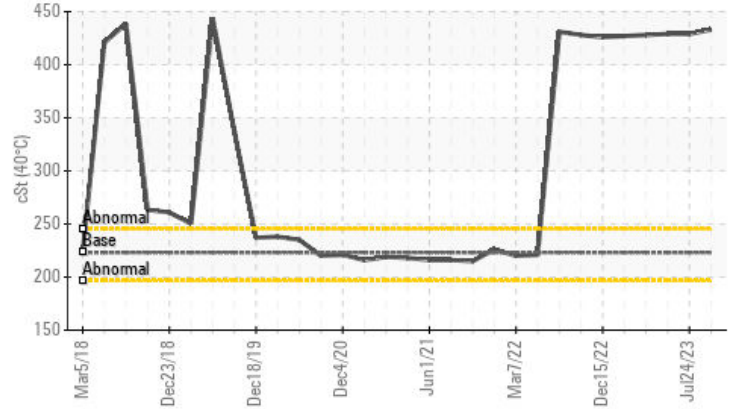


### COMPONENT CONDITION SUMMARY

▲ 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			<b>ABNORMAL</b>	ABNORMAL	ABNORMAL
Particles >4µm	ASTM D7647	>20000	▲ <b>46553</b>	▲ 51219	▲ 55018
Particles >6µm	ASTM D7647	>5000	▲ <b>6504</b>	▲ 7305	▲ 8242
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ <b>23/20/14</b>	▲ 23/20/14	▲ 23/20/14
Visc @ 40°C	cSt	ASTM D445 223	▲ <b>433</b>	▲ 429	▲ 429

Customer Id: ROCROCUS  
 Sample No.: WC0842456  
 Lab Number: 05962207  
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Don Baldrige +1  
[don.b505@comcast.net](mailto:don.b505@comcast.net)

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 if applicable.

## HISTORICAL DIAGNOSIS

### 24 Jul 2023 Diag: Doug Bogart

#### VISCOSITY



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. There is a high amount of silt (particulates < 14 microns in size) present in the oil. Viscosity of sample indicates oil is within ISO 460 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

view report



### 30 May 2023 Diag: Don Baldrige

#### VISCOSITY



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. There is a high amount of silt (particulates < 14 microns in size) present in the oil. Viscosity of sample indicates oil is within ISO 460 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

view report



### 04 Apr 2023 Diag: Angela Borella

#### VISCOSITY



We recommend you service the filters on this component if applicable. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. Viscosity of sample indicates oil is within ISO 460 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

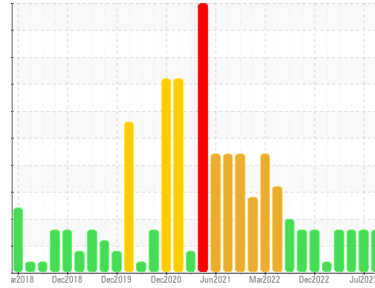
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# OIL ANALYSIS REPORT

Sample Rating Trend



## VISCOSITY



Area  
**SOUTH KETTLE ROOM**  
Machine Id  
**B46483 - KETTLE 9**

Component  
**Gearbox**  
Fluid  
**PETRO CANADA ENDURATEX SYNTHETIC EP 220 (3 GAL)**

### 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 silt (particulates < 14 microns in size) present in the oil.

#### Fluid Condition

Viscosity of sample indicates oil is within ISO 460 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	<b>WC0842456</b>	WC0820502	WC0799748
Sample Date	Client Info	<b>18 Sep 2023</b>	24 Jul 2023	30 May 2023
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

### WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >200	<b>6</b>	8	6
Chromium	ppm	ASTM D5185m >10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m >10	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>18</b>	23	18
Lead	ppm	ASTM D5185m >50	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >200	<b>&lt;1</b>	0	0
Tin	ppm	ASTM D5185m >10	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

### ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 33	<b>0</b>	0	0
Barium	ppm	ASTM D5185m 5	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 5	<b>&lt;1</b>	0	<1
Calcium	ppm	ASTM D5185m 5	<b>21</b>	22	19
Phosphorus	ppm	ASTM D5185m 437	<b>524</b>	555	505
Zinc	ppm	ASTM D5185m 5	<b>6</b>	2	9
Sulfur	ppm	ASTM D5185m 5000	<b>606</b>	698	566

### CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >50	<b>15</b>	17	15
Sodium	ppm	ASTM D5185m	<b>12</b>	12	8
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	1

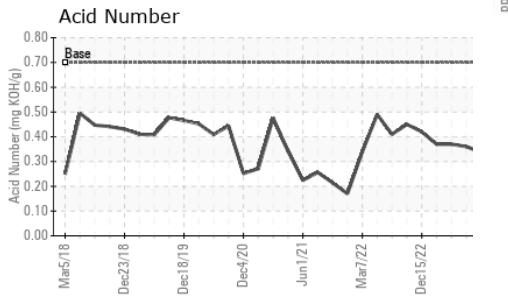
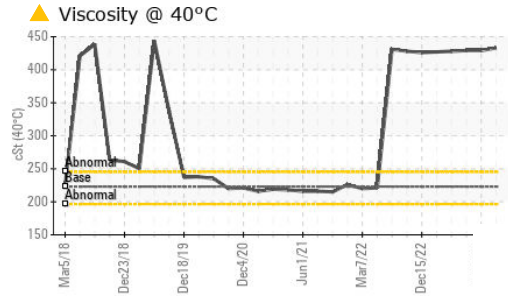
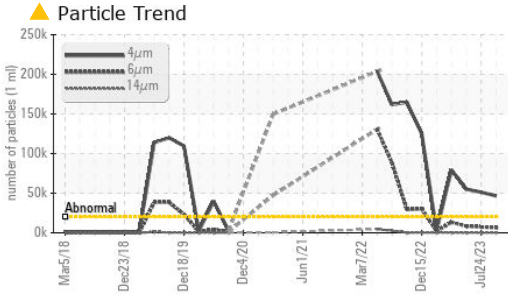
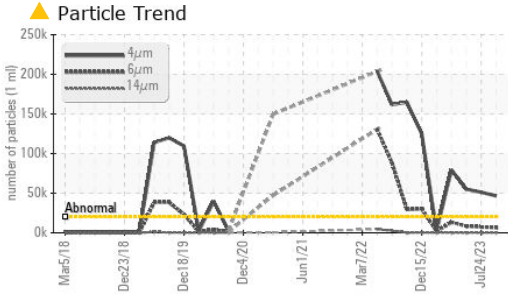
### FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >20000	<b>▲ 46553</b>	▲ 51219	▲ 55018
Particles >6µm	ASTM D7647 >5000	<b>▲ 6504</b>	▲ 7305	▲ 8242
Particles >14µm	ASTM D7647 >640	<b>94</b>	99	127
Particles >21µm	ASTM D7647 >160	<b>10</b>	11	16
Particles >38µm	ASTM D7647 >40	<b>1</b>	1	1
Particles >71µm	ASTM D7647 >10	<b>1</b>	1	0
Oil Cleanliness	ISO 4406 (c) >21/19/16	<b>▲ 23/20/14</b>	▲ 23/20/14	▲ 23/20/14

### FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045 0.7	<b>0.38</b>	0.337	0.36

# OIL ANALYSIS REPORT

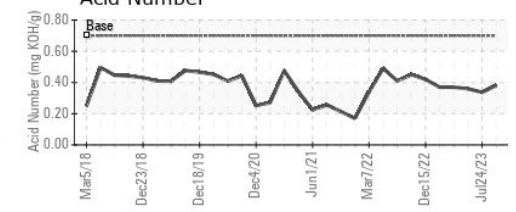
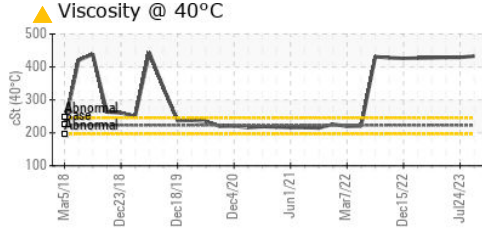
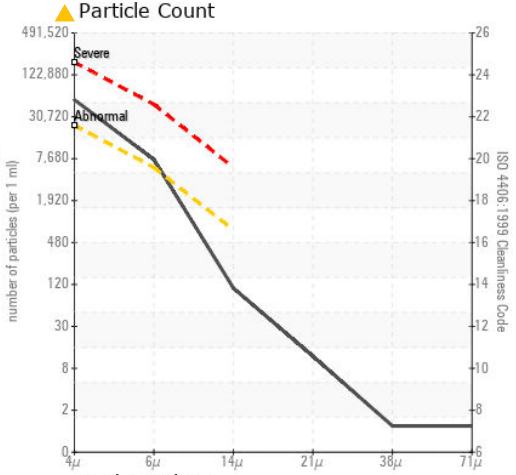
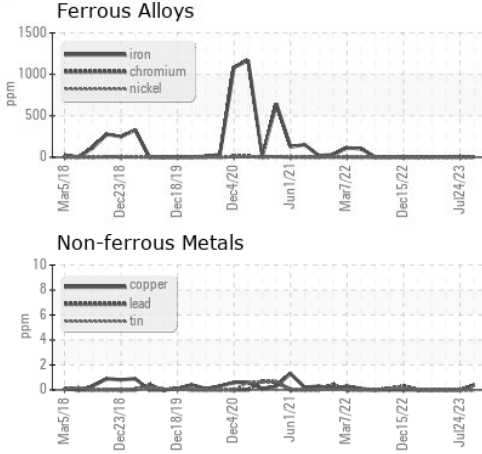


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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 223	▲ 433	▲ 429	▲ 429

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0842456 **Received** : 27 Sep 2023  
**Lab Number** : 05962207 **Diagnosed** : 28 Sep 2023  
**Unique Number** : 10668758 **Diagnostician** : Don Baldrige  
**Test Package** : IND 2 ( Additional Tests: PrtCount )

**Rochelle Foods - PRE**  
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 Rochelle, IL  
 US 61068  
 Contact: JAMES ROBINSON III  
 jrobinson3@hormel.com  
 T:  
 F: (815)562-4147

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)