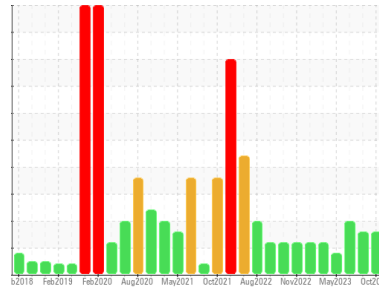




# PROBLEM SUMMARY

Area  
**NORTH KETTLE ROOM**  
 Machine Id  
**BUSCH B26486 - KETTLE 3**  
 Component  
**Gearbox**  
 Fluid  
**PETRO CANADA 220 (--- GAL)**

Sample Rating Trend

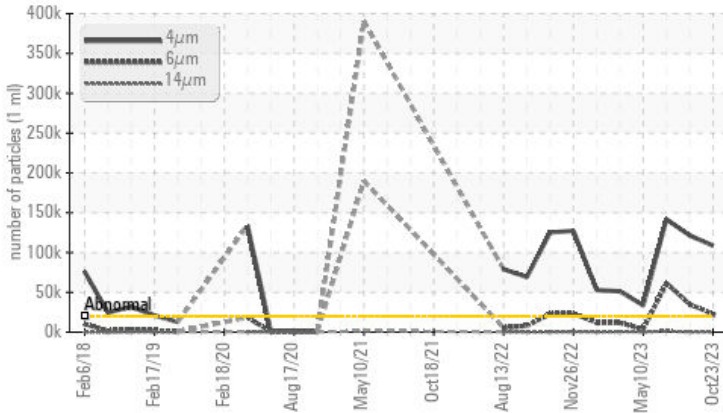


## VISCOSITY

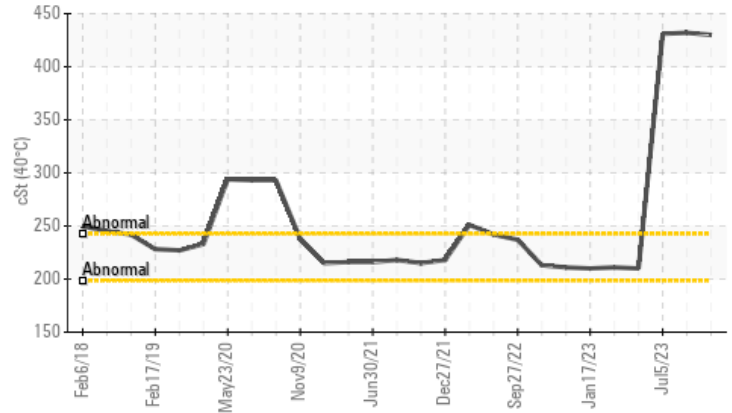


### COMPONENT CONDITION SUMMARY

▲ 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>108664</b>	▲ 121325	▲ 141738
Particles >6µm	ASTM D7647	>5000	▲ <b>22710</b>	▲ 34959	▲ 61464
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ <b>24/22/15</b>	▲ 24/22/15	▲ 24/23/18
Visc @ 40°C	cSt	ASTM D445	▲ <b>430</b>	▲ 432	▲ 431

Customer Id: ROCROCUS  
 Sample No.: WC0856101  
 Lab Number: 05997951  
 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

### 28 Aug 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



### 05 Jul 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 particulates 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



### 10 May 2023 Diag: Jonathan Hester

#### ISO



No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. There is a moderate amount of silt (particulates < 6 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

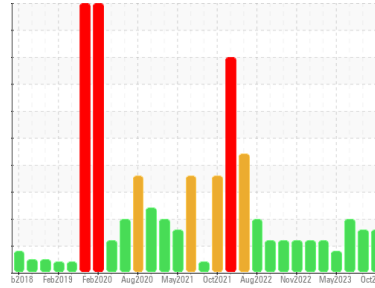
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



## VISCOSITY



Area  
**NORTH KETTLE ROOM**  
Machine Id  
**BUSCH B26486 - KETTLE 3**  
Component  
**Gearbox**  
Fluid  
**PETRO CANADA 220 (--- 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>WC0856101</b>	WC0842427	WC0820552
Sample Date	Client Info	<b>23 Oct 2023</b>	28 Aug 2023	05 Jul 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>4</b>	5	5
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>11</b>	13	15
Lead	ppm	ASTM D5185m >50	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >200	<b>0</b>	0	0
Tin	ppm	ASTM D5185m >10	<b>&lt;1</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	<b>0</b>	0	0
Barium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Calcium	ppm	ASTM D5185m	<b>30</b>	32	25
Phosphorus	ppm	ASTM D5185m	<b>506</b>	545	513
Zinc	ppm	ASTM D5185m	<b>4</b>	0	0
Sulfur	ppm	ASTM D5185m	<b>577</b>	627	602

### CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >50	<b>11</b>	13	13
Sodium	ppm	ASTM D5185m	<b>6</b>	8	4
Potassium	ppm	ASTM D5185m >20	<b>0</b>	0	0

### FLUID CLEANLINESS

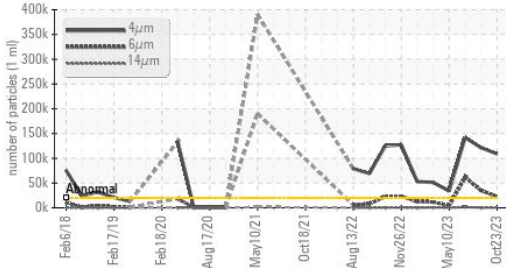
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >20000	<b>▲ 108664</b>	▲ 121325	▲ 141738
Particles >6µm	ASTM D7647 >5000	<b>▲ 22710</b>	▲ 34959	▲ 61464
Particles >14µm	ASTM D7647 >640	<b>209</b>	243	▲ 1346
Particles >21µm	ASTM D7647 >160	<b>27</b>	21	73
Particles >38µm	ASTM D7647 >40	<b>0</b>	0	0
Particles >71µm	ASTM D7647 >10	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c) >21/19/16	<b>▲ 24/22/15</b>	▲ 24/22/15	▲ 24/23/18

### FLUID DEGRADATION

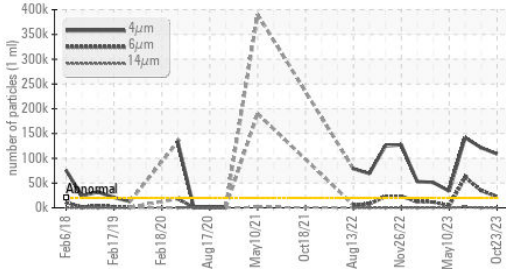
method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>0.37</b>	0.38	0.41

# OIL ANALYSIS REPORT

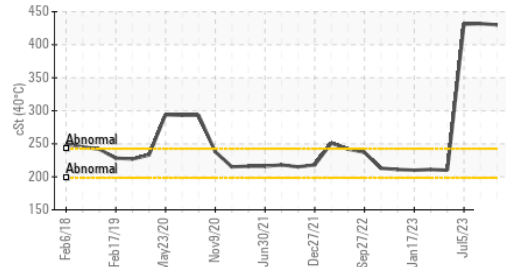
▲ Particle Trend



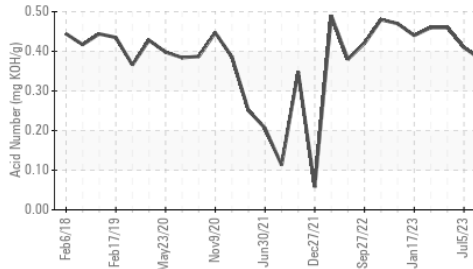
▲ Particle Trend



▲ Viscosity @ 40°C



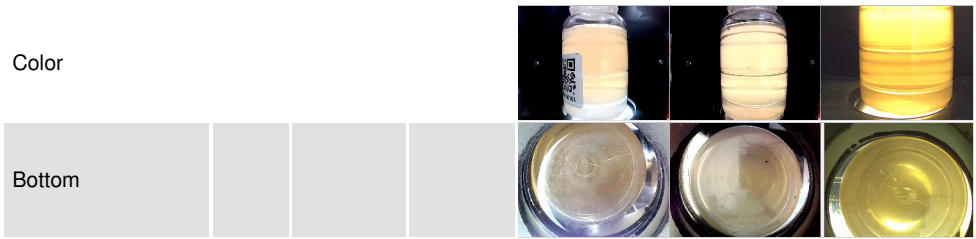
Acid Number



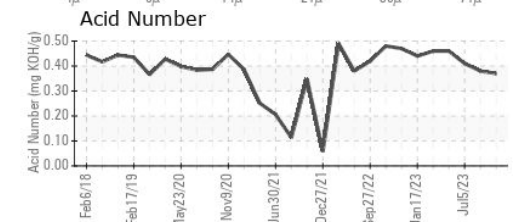
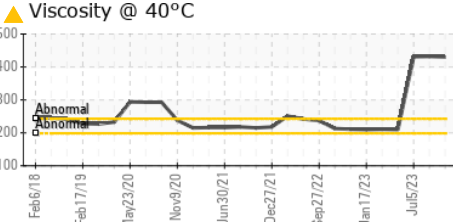
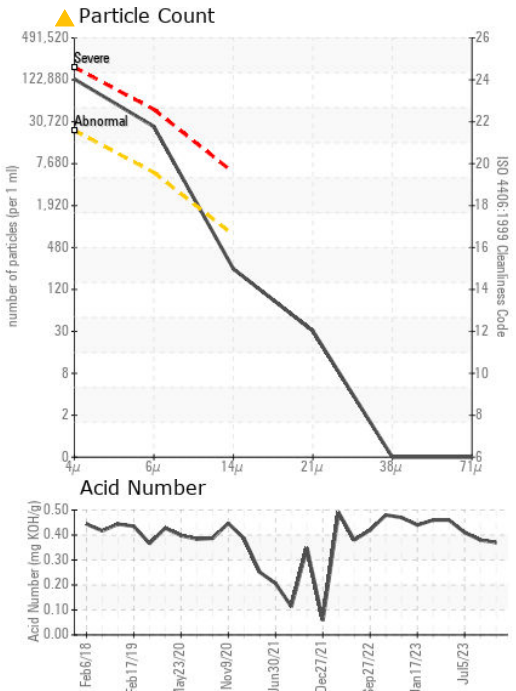
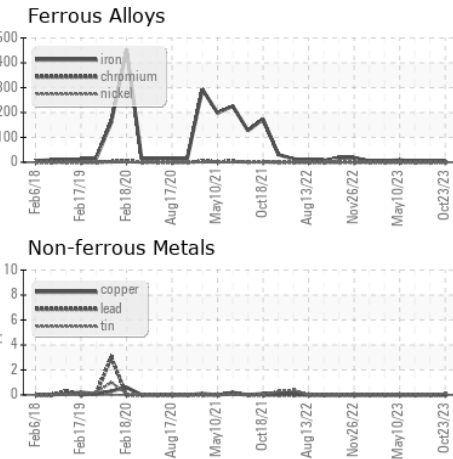
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	▲ 430	▲ 432	▲ 431

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.** : WC0856101 **Received** : 03 Nov 2023  
**Lab Number** : 05997951 **Diagnosed** : 06 Nov 2023  
**Unique Number** : 10726311 **Diagnostician** : Don Baldrige  
**Test Package** : IND 2 ( Additional Tests: PrtCount )

**Rochelle Foods - PRE**  
 1001 South Main, P.O. Box 45  
 Rochelle, IL  
 US 61068  
 Contact: JAMES ROBINSON III  
 jrobinson3@hormel.com

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)

T:  
 F: (815)562-4147