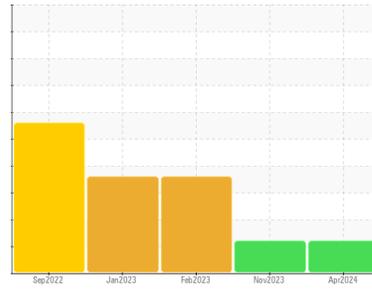




# OIL ANALYSIS REPORT

## Sample Rating Trend



ISO



Area

5 Utilities/031 Water Pumping/Gearbox/P Pump/751B #2 Fire Pump

Machine Id  
**31GP751B #2 Fire Pump Gearbox**

Component

**Gearbox**

Fluid

**PETRO CANADA ENDURATEX EP 150 (17 LTR)**

### DIAGNOSIS

#### Recommendation

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

#### Wear

All component wear rates are normal.

#### Contamination

There is a moderate 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>WC0902169</b>	WC0813228	WC0783268
Sample Date	Client Info		<b>01 Apr 2024</b>	02 Nov 2023	08 Feb 2023
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>ABNORMAL</b>	ABNORMAL	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 D5185(m)	>200	<b>4</b>	3	8
Chromium	ppm	ASTM D5185(m)	>15	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	>15	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185(m)	>25	<b>0</b>	0	<1
Lead	ppm	ASTM D5185(m)	>100	<b>0</b>	<1	0
Copper	ppm	ASTM D5185(m)	>200	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185(m)	>25	<b>0</b>	0	<1
Antimony	ppm	ASTM D5185(m)	>5	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0	0

### ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)	55	<b>60</b>	63	57
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185(m)	2	<b>&lt;1</b>	<1	1
Calcium	ppm	ASTM D5185(m)	6	<b>2</b>	4	4
Phosphorus	ppm	ASTM D5185(m)	250	<b>246</b>	256	257
Zinc	ppm	ASTM D5185(m)	3	<b>2</b>	3	3
Sulfur	ppm	ASTM D5185(m)	7500	<b>4769</b>	4893	4438
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

### CONTAMINANTS

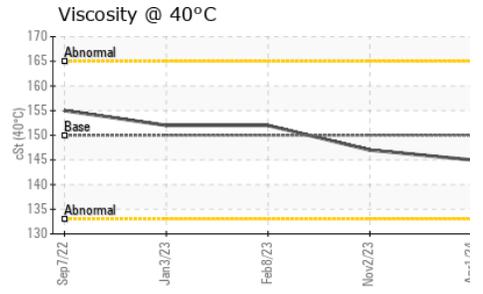
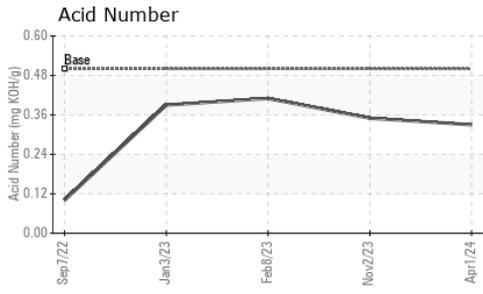
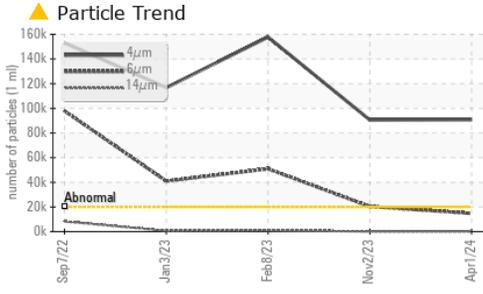
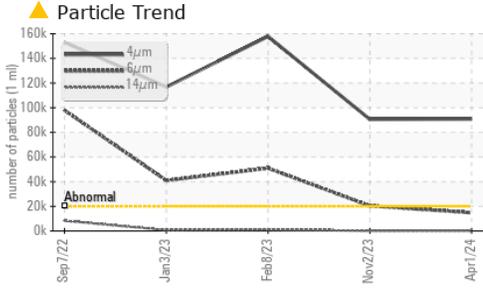
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>50	<b>&lt;1</b>	3	5
Sodium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	<b>0</b>	0	<1

### FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	<b>▲ 90806</b>	▲ 90539	▲ 157788
Particles >6µm	ASTM D7647	>5000	<b>▲ 14801</b>	▲ 20383	▲ 50918
Particles >14µm	ASTM D7647	>640	<b>203</b>	165	● 1064
Particles >21µm	ASTM D7647	>160	<b>22</b>	28	129
Particles >38µm	ASTM D7647	>40	<b>3</b>	10	2
Particles >71µm	ASTM D7647	>10	<b>2</b>	9	0
Oil Cleanliness	ISO 4406 (c)	>21/19/16	<b>▲ 24/21/15</b>	▲ 24/22/15	▲ 24/23/17



# OIL ANALYSIS REPORT

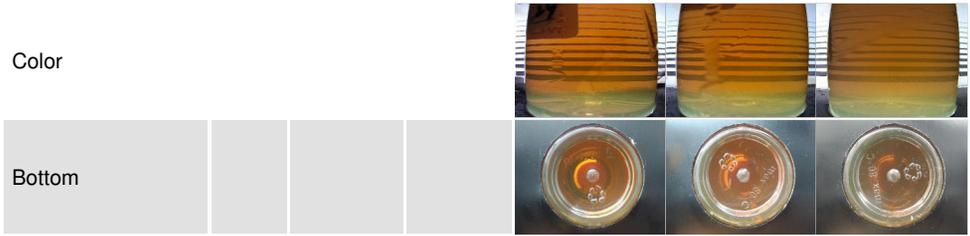


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.5	<b>0.33</b>	0.35	0.41

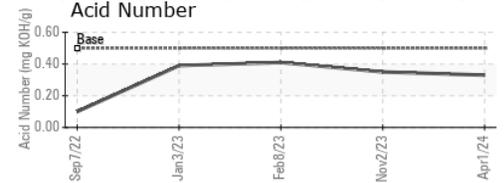
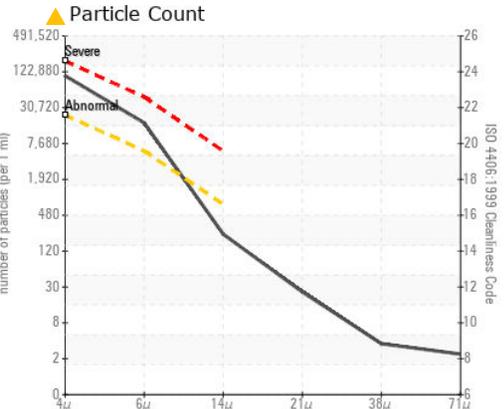
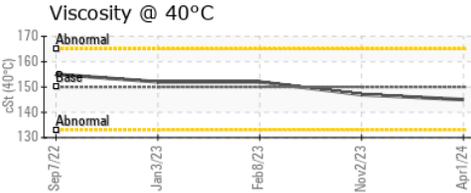
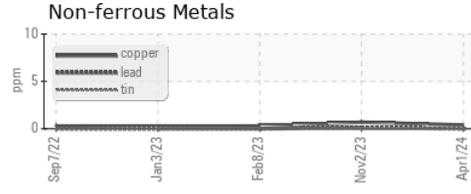
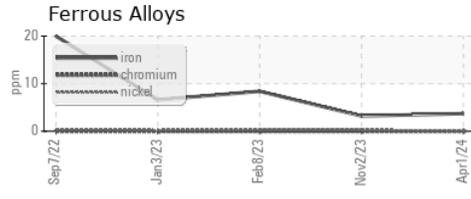
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	150.0	<b>145</b>	147	152

SAMPLE IMAGES		method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0902169  
**Lab Number** : 02627100  
**Unique Number** : 5760232  
**Test Package** : IND 2  
**Received** : 05 Apr 2024  
**Tested** : 08 Apr 2024  
**Diagnosed** : 08 Apr 2024 - Wes Davis

**Petro Canada Lubricants Inc.**  
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 Mississauga, ON  
 CA L5J 2Y3  
 Contact: Martin Wagenaar  
 martin.wagenaar@HFSinclair.com  
 T: (905)403-5682  
 F: (905)822-6025

To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.