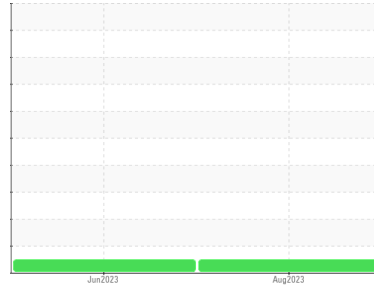




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id

**118**

Component

**Diesel Engine**

Fluid

**PETRO CANADA 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

### Wear

All component wear rates are normal.

### Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>WC0517499</b>	WC0822392	---
Sample Date	Client Info			<b>11 Aug 2023</b>	21 Jun 2023	---
Machine Age	hrs	Client Info		<b>3568</b>	3302	---
Oil Age	hrs	Client Info		<b>266</b>	242	---
Oil Changed	Client Info			<b>Changed</b>	N/A	---
Sample Status				<b>NORMAL</b>	NORMAL	---

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<b>&lt;1.0</b>	<1.0	---
Glycol	WC Method			<b>NEG</b>	NEG	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	<b>22</b>	21	---
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	---
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	---
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	---
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	---
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	3	---
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	---
Copper	ppm	ASTM D5185m	>330	<b>3</b>	4	---
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	---
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	---

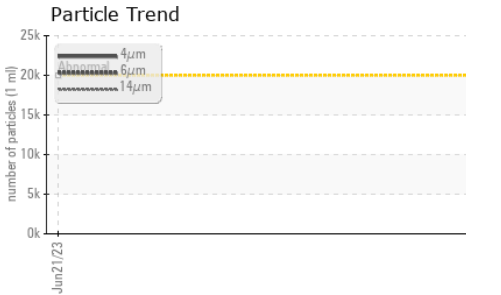
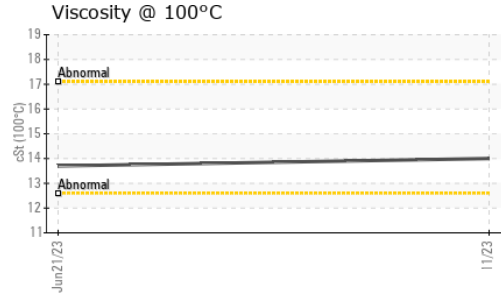
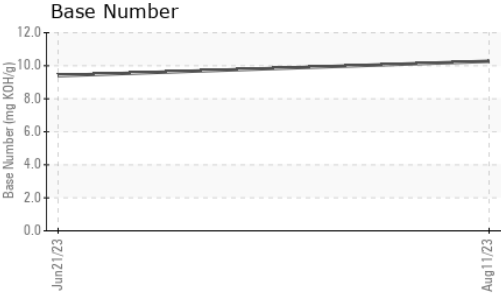
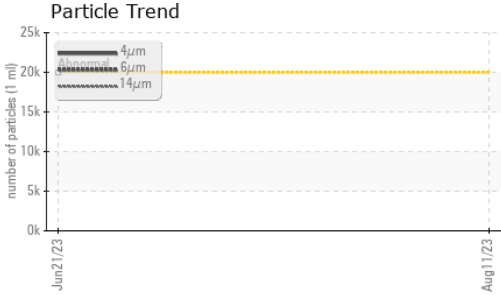
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>3</b>	14	---
Barium	ppm	ASTM D5185m		<b>0</b>	<1	---
Molybdenum	ppm	ASTM D5185m		<b>60</b>	61	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185m		<b>895</b>	964	---
Calcium	ppm	ASTM D5185m		<b>1083</b>	1221	---
Phosphorus	ppm	ASTM D5185m		<b>979</b>	1067	---
Zinc	ppm	ASTM D5185m		<b>1178</b>	1299	---
Sulfur	ppm	ASTM D5185m		<b>3009</b>	3829	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>4</b>	4	---
Sodium	ppm	ASTM D5185m		<b>3</b>	5	---
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	2	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.3	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.8</b>	6.9	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.8</b>	19.4	---



# OIL ANALYSIS REPORT



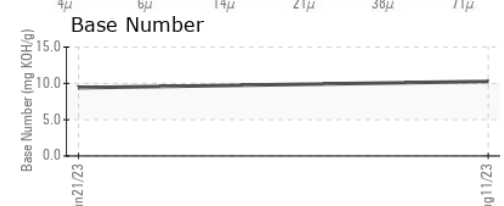
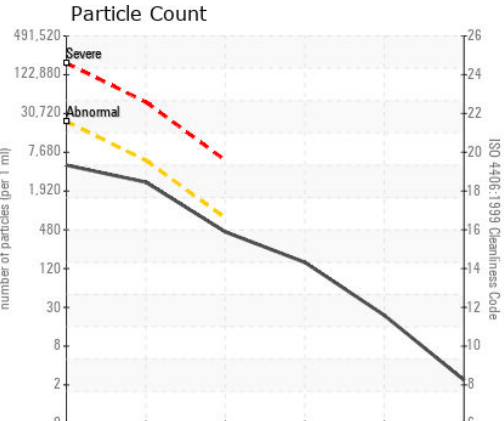
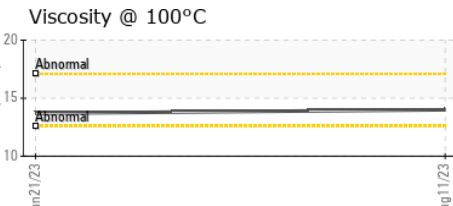
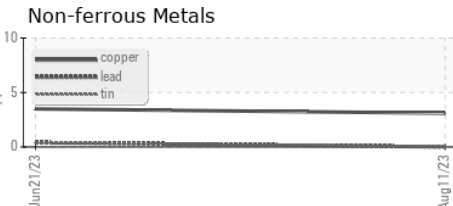
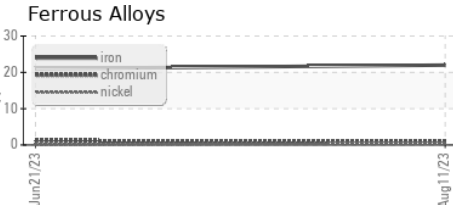
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	<b>4219</b>	---	---
Particles >6µm	ASTM D7647	>5000	<b>2299</b>	---	---
Particles >14µm	ASTM D7647	>640	<b>391</b>	---	---
Particles >21µm	ASTM D7647	>160	<b>132</b>	---	---
Particles >38µm	ASTM D7647	>40	<b>20</b>	---	---
Particles >71µm	ASTM D7647	>10	<b>2</b>	---	---
Oil Cleanliness	ISO 4406 (c)	>21/19/16	<b>19/18/16</b>	---	---

FLUID DEGRADATION	method	limit/base	current	history1	history2	
Oxidation	Abs./1mm	*ASTM D7414	>25	<b>14.5</b>	15.4	---
Base Number (BN)	mg KOH/g	ASTM D2896		<b>10.27</b>	9.4	---

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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	<b>14.0</b>	13.7	---

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0517499 **Received** : 30 Aug 2023  
**Lab Number** : **05939130** **Diagnosed** : 31 Aug 2023  
**Unique Number** : 10629742 **Diagnostician** : Wes Davis  
**Test Package** : IND 2 ( Additional Tests: PrtCount )

**C.L. BENTON & SONS INC**  
 706 38TH AVE N  
 MYRTLE BEACH, SC  
 US 29577  
 Contact: NEIL  
 neil@clbenton.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: