

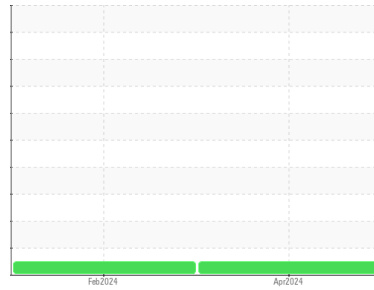


# OIL ANALYSIS REPORT



Machine Id  
**CATERPILLAR HOE 117**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA 15W40 (--- GAL)**

### Sample Rating Trend



**NORMAL**



### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

#### 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>WC0893841</b>	WC0906052	---
Sample Date	Client Info			<b>27 Apr 2024</b>	09 Feb 2024	---
Machine Age	hrs	Client Info		<b>4564</b>	4316	---
Oil Age	hrs	Client Info		<b>248</b>	0	---
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	---
Water	WC Method	>0.2		<b>NEG</b>	NEG	---
Glycol	WC Method			<b>NEG</b>	NEG	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	<b>13</b>	19	---
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	<1	---
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	---
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	0	---
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>25	<b>&lt;1</b>	1	---
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	---
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	1	---
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</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>8</b>	46	---
Barium	ppm	ASTM D5185m		<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m		<b>57</b>	28	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185m		<b>870</b>	242	---
Calcium	ppm	ASTM D5185m		<b>1216</b>	2001	---
Phosphorus	ppm	ASTM D5185m		<b>1036</b>	1009	---
Zinc	ppm	ASTM D5185m		<b>1245</b>	1171	---
Sulfur	ppm	ASTM D5185m		<b>3454</b>	3450	---

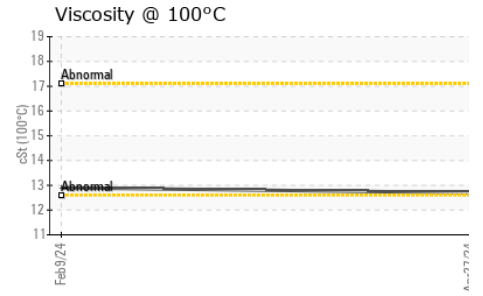
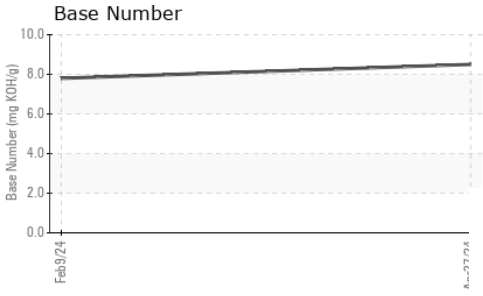
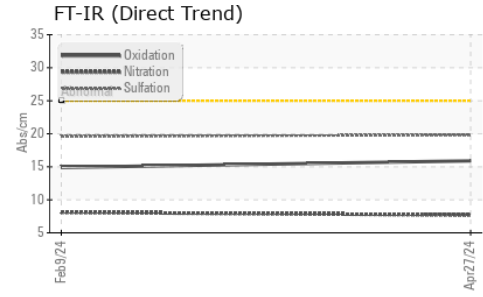
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>3</b>	3	---
Sodium	ppm	ASTM D5185m		<b>2</b>	2	---
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	1	---

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>7.7</b>	8.1	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.8</b>	19.6	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.9</b>	14.9	---
Base Number (BN)	mg KOH/g	ASTM D2896		<b>8.5</b>	7.8	---



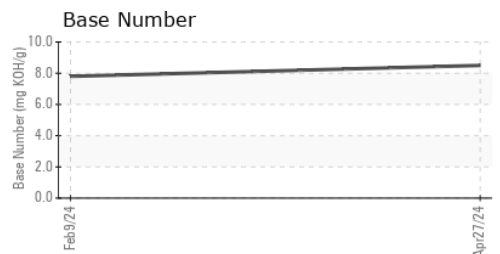
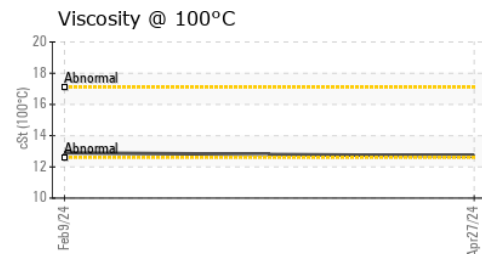
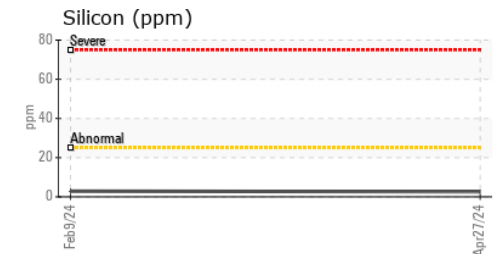
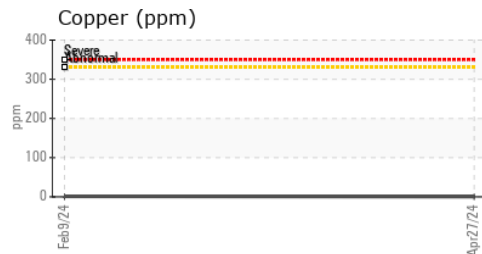
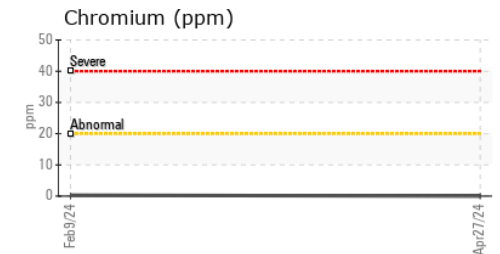
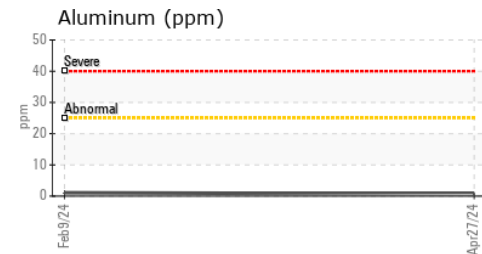
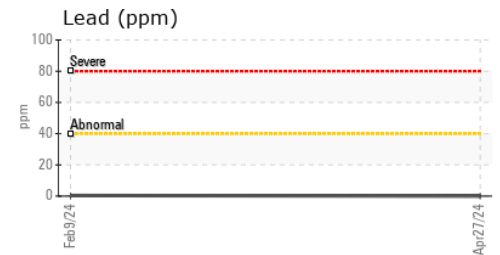
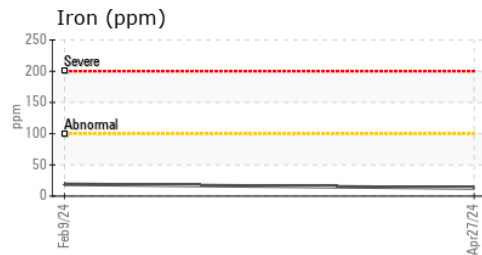
# OIL ANALYSIS REPORT



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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.7	12.9	---

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0893841      **Received** : 17 May 2024  
**Lab Number** : **06183807**      **Tested** : 20 May 2024  
**Unique Number** : 11035133      **Diagnosed** : 20 May 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**C.L. BENTON & SONS INC**  
 706 38TH AVE N  
 MYRTLE BEACH, SC  
 US 29577  
 Contact: JAMIE HUCKS  
 shop@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)