



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**CATERPILLAR OFF ROAD 157**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0878815</b>	WC0868194	WC0517501
Sample Date		Client Info		<b>20 Feb 2024</b>	16 Nov 2023	22 Aug 2023
Machine Age	hrs	Client Info		<b>3143</b>	2824	2543
Oil Age	hrs	Client Info		<b>319</b>	281	286
Filter Age	hrs	Client Info		<b>319</b>	281	286
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>24</b>	38	40
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>1</b>	2	2
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>7</b>	2	2
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

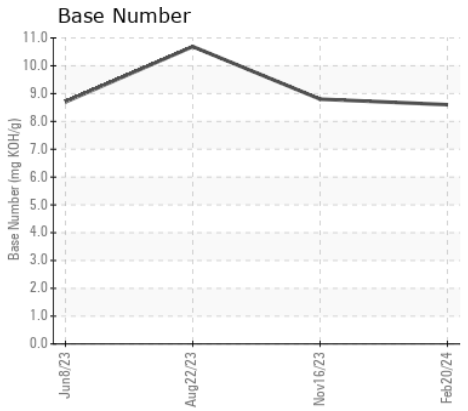
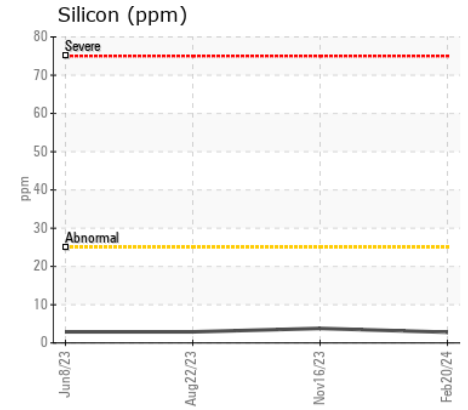
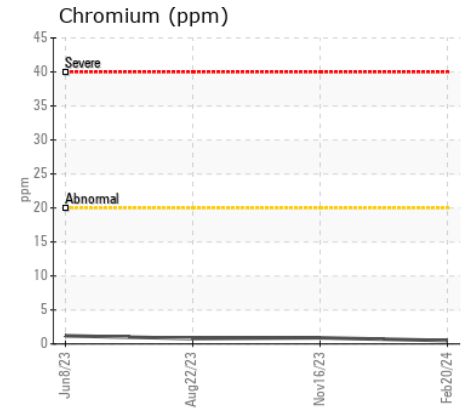
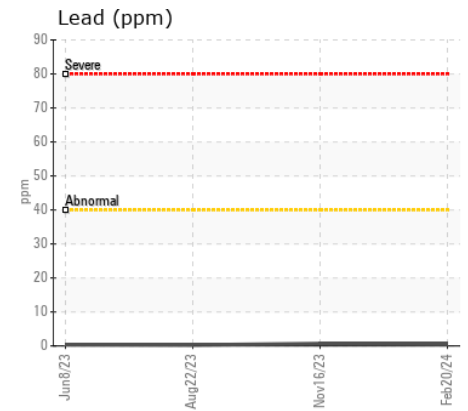
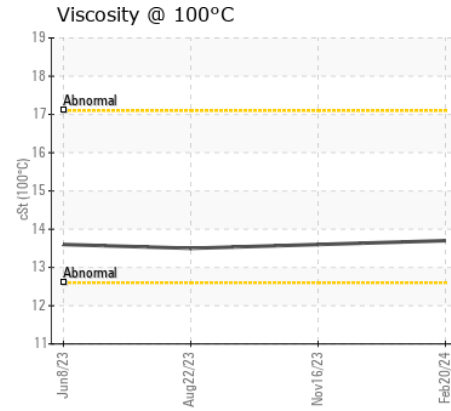
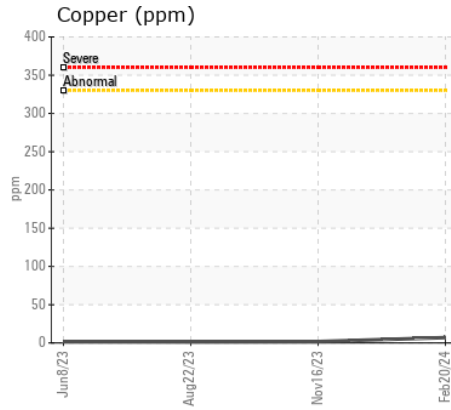
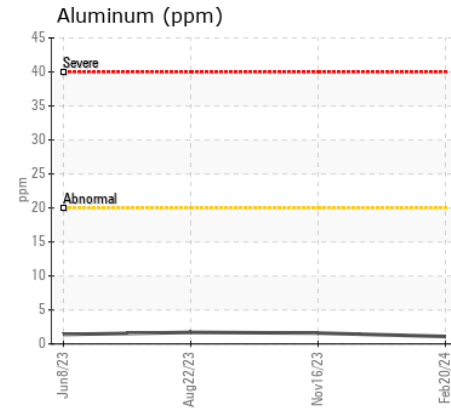
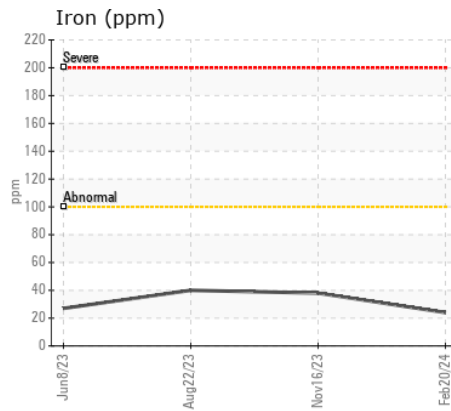
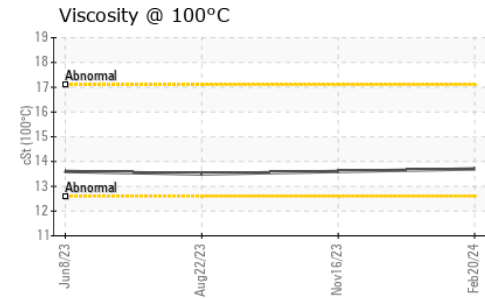
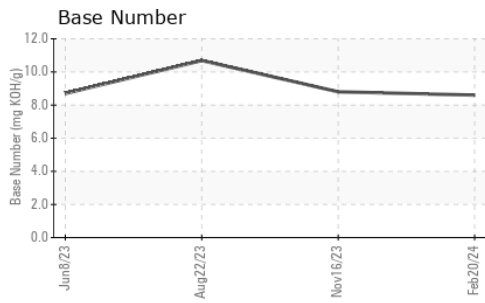
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>3</b>	4	3
Potassium	ppm	ASTM D5185m	>20	<b>5</b>	5	5
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.6</b>	1.2	1.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.6</b>	7.5	7.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.6</b>	20.1	20.4
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</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

## 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.

Sodium	ppm	ASTM D5185m		<b>5</b>	0	1
Boron	ppm	ASTM D5185m		<b>7</b>	6	5
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>56</b>	60	60
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>891</b>	917	865
Calcium	ppm	ASTM D5185m		<b>1053</b>	1131	1081
Phosphorus	ppm	ASTM D5185m		<b>1068</b>	931	1012
Zinc	ppm	ASTM D5185m		<b>1246</b>	1194	1194
Sulfur	ppm	ASTM D5185m		<b>3024</b>	3243	3084
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.7</b>	13.8	13.8
Base Number (BN)	mg KOH/g	ASTM D2896		<b>8.6</b>	8.8	10.69
Visc @ 100°C	cSt	ASTM D445		<b>13.7</b>	13.6	13.5



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0878815 **Received** : 29 Feb 2024  
**Lab Number** : 06105016 **Tested** : 01 Mar 2024  
**Unique Number** : 10903246 **Diagnosed** : 01 Mar 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: 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)

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F: