



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id  
**CATERPILLAR D6R 106**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA 15W40 (--- GAL)**

## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0878817</b>	WC0868063	WC0822166
Sample Date		Client Info		<b>14 Feb 2024</b>	28 Nov 2023	07 Oct 2023
Machine Age	hrs	Client Info		<b>16607</b>	16340	16088
Oil Age	hrs	Client Info		<b>267</b>	252	262
Filter Age	hrs	Client Info		<b>267</b>	252	262
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ATTENTION</b>	ATTENTION	ATTENTION

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>4</b>	3	6
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>1</b>	1	<1
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	<1	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

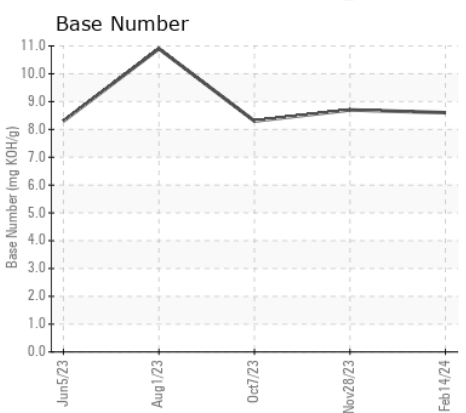
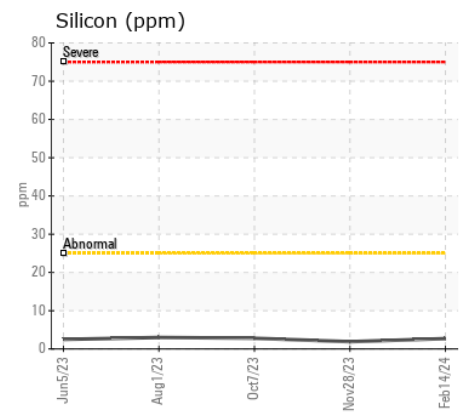
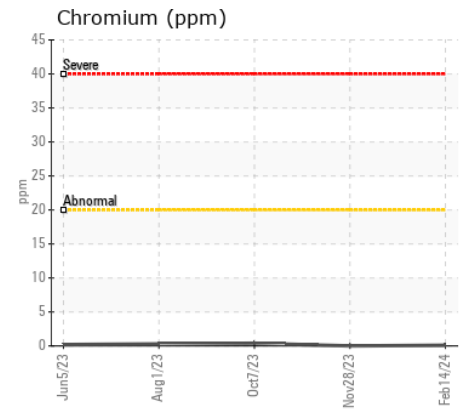
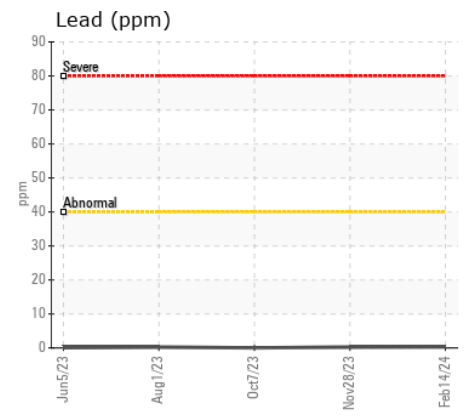
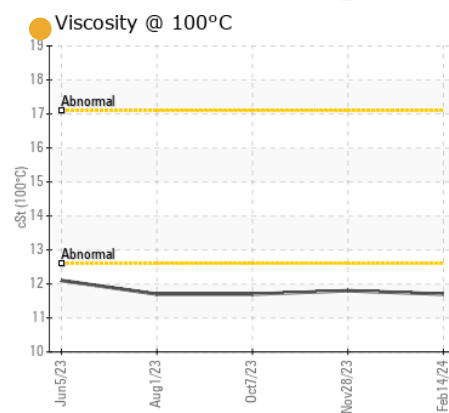
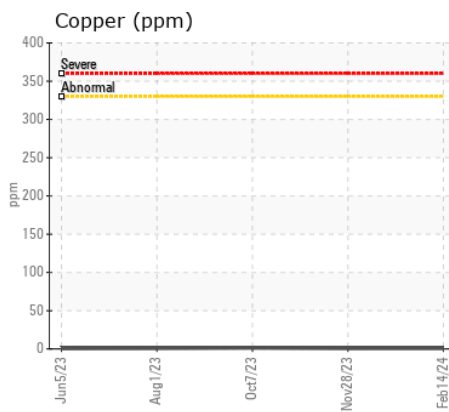
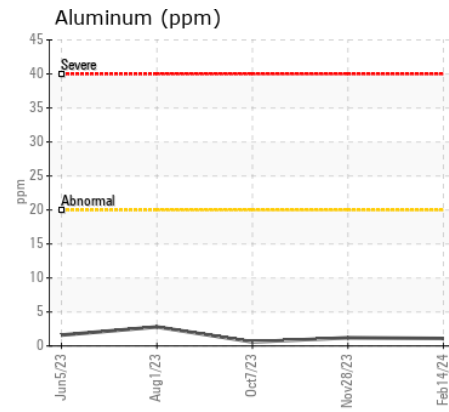
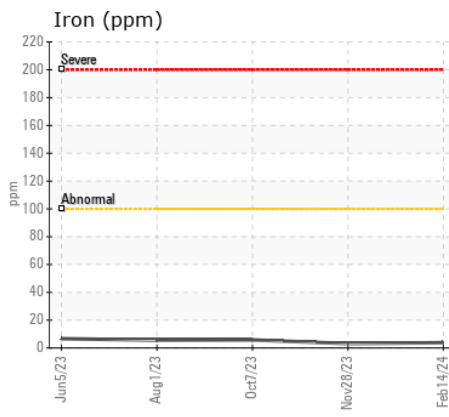
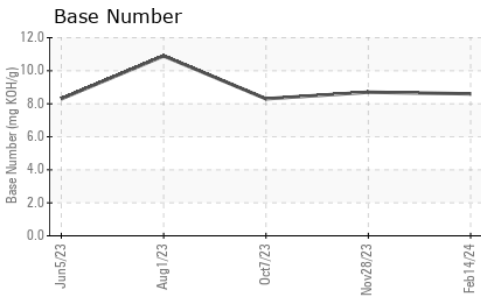
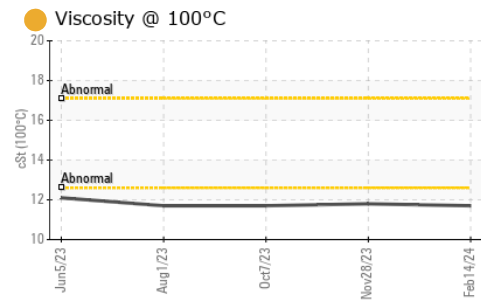
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>3</b>	2	3
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	0
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>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.0</b>	6.8	6.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.4</b>	18.5	18.0
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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		<b>2</b>	1	4
Boron	ppm	ASTM D5185m		<b>5</b>	8	5
Barium	ppm	ASTM D5185m		<b>0</b>	0	4
Molybdenum	ppm	ASTM D5185m		<b>58</b>	64	60
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>961</b>	958	867
Calcium	ppm	ASTM D5185m		<b>1060</b>	1112	1060
Phosphorus	ppm	ASTM D5185m		<b>1145</b>	1143	975
Zinc	ppm	ASTM D5185m		<b>1302</b>	1323	1119
Sulfur	ppm	ASTM D5185m		<b>3241</b>	3381	2862
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.8</b>	14.5	14.2
Base Number (BN)	mg KOH/g	ASTM D2896		<b>8.6</b>	8.7	8.3
Visc @ 100°C	cSt	ASTM D445		<b>11.7</b>	11.8	11.7



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0878817 **Received** : 29 Feb 2024  
**Lab Number** : 06105018 **Tested** : 01 Mar 2024  
**Unique Number** : 10903248 **Diagnosed** : 04 Mar 2024 - Sean Felton  
**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)