



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>ABNORMAL</b>
FLUID CONDITION	<b>ABNORMAL</b>

Machine Id  
**1 PALACE PIER**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA XR 4 SAE 15W40 (--- LTR)**

## RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0910640</b>	WC0794978	WC0727146
Sample Date		Client Info		<b>02 Apr 2024</b>	04 Jun 2023	04 Sep 2022
Machine Age	hrs	Client Info		<b>0</b>	0	0
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	<b>6</b>	5	6
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	▲ 3	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185(m)	>40	<b>3</b>	2	3
Copper	ppm	ASTM D5185(m)	>330	<b>2</b>	2	3
Tin	ppm	ASTM D5185(m)	>15	<b>2</b>	1	2
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

## CONTAMINATION

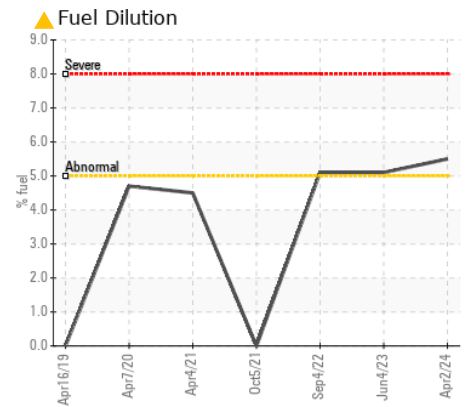
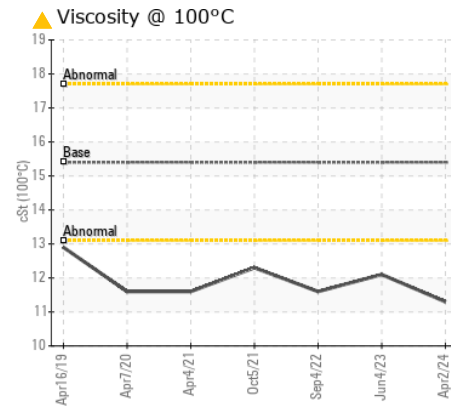
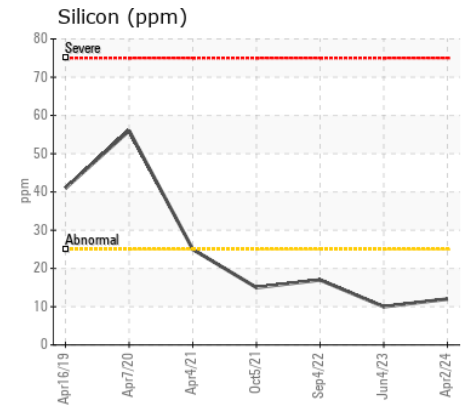
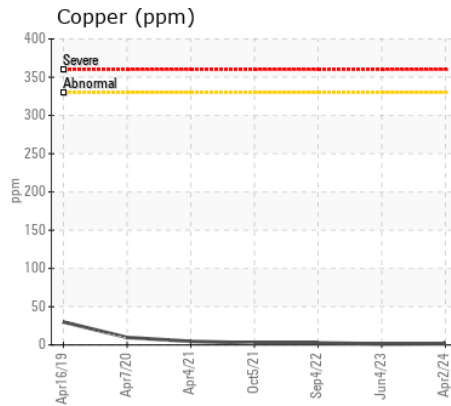
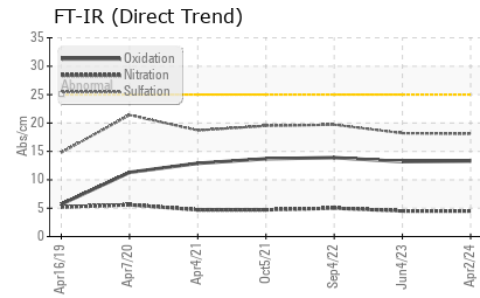
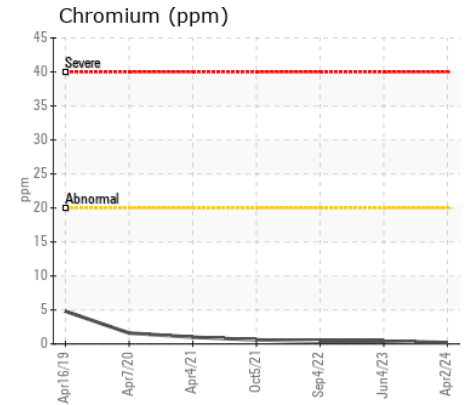
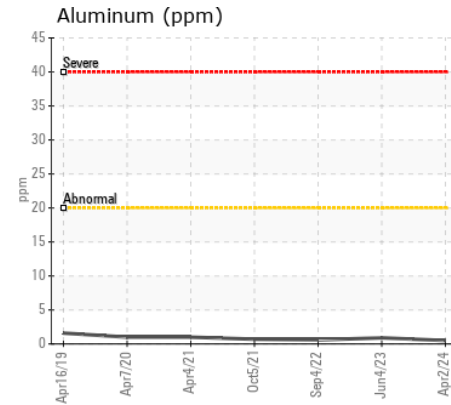
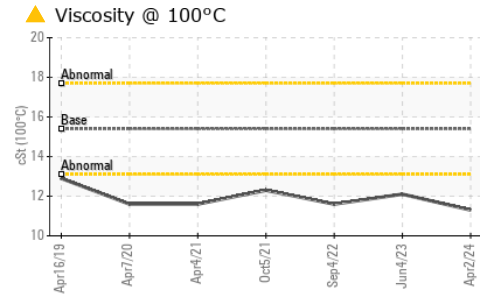
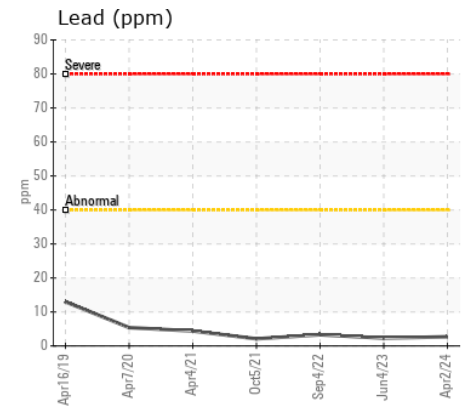
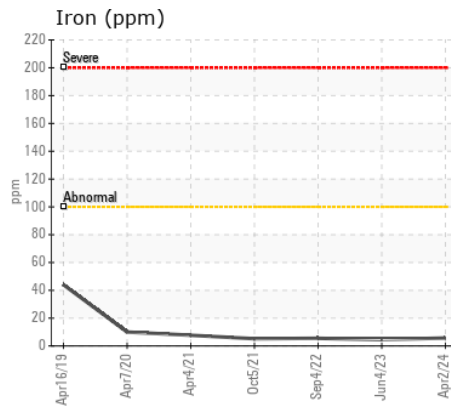
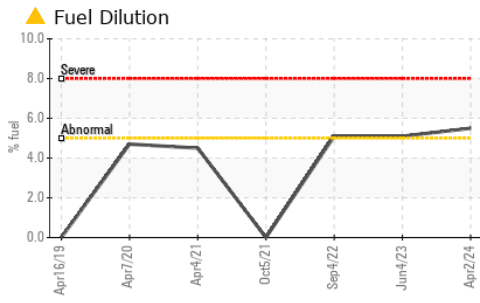
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>12</b>	10	17
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Fuel	%	ASTM D7593*	>5	▲ <b>5.5</b>	▲ 5.1	▲ 5.1
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	ASTM D7844*	>3	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>4.5</b>	4.5	5.0
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>18.1</b>	18.2	19.7
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		<b>1</b>	1	2
Boron	ppm	ASTM D5185(m)	1	<b>4</b>	13	<1
Barium	ppm	ASTM D5185(m)	1	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	1	<b>57</b>	59	56
Manganese	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	10	<b>953</b>	898	927
Calcium	ppm	ASTM D5185(m)	3032	<b>1001</b>	1031	1058
Phosphorus	ppm	ASTM D5185(m)	1054	<b>985</b>	1010	1077
Zinc	ppm	ASTM D5185(m)	1332	<b>1136</b>	1078	1161
Sulfur	ppm	ASTM D5185(m)	3985	<b>2641</b>	2577	2826
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>13.3</b>	13.2	13.9
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	▲ <b>11.3</b>	▲ 12.1	▲ 11.6



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0910640  
**Lab Number** : 02632998  
**Unique Number** : 5774151  
**Test Package** : MOB 1 ( Additional Tests: PercentFuel )

**Received** : 03 May 2024  
**Tested** : 06 May 2024  
**Diagnosed** : 06 May 2024 - Wes Davis

**NORTHERN GENERATOR CO. LTD.**  
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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.