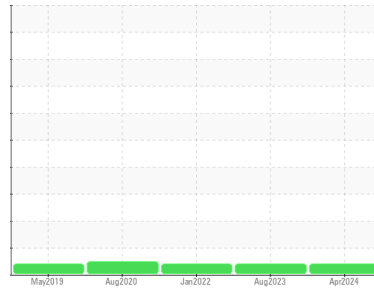




# OIL ANALYSIS REPORT

## Sample Rating Trend



## VISCOSITY



Machine Id

**423**

Component

**Diesel Engine**

Fluid

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

### DIAGNOSIS

#### Recommendation

Oil and filter change at the time of sampling has been noted. 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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>RW0005068</b>	RW0004615	RW0002451
Sample Date	Client Info			<b>03 Apr 2024</b>	02 Aug 2023	31 Jan 2022
Machine Age	hrs	Client Info		<b>3620</b>	3455	3248
Oil Age	hrs	Client Info		<b>164</b>	210	176
Oil Changed	Client Info			<b>Changed</b>	Changed	Changed
Sample Status				<b>ATTENTION</b>	ATTENTION	ATTENTION

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method	>0.2		<b>NEG</b>	NEG	NEG
Glycol	WC Method			<b>NEG</b>	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	<b>6</b>	5	6
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	1
Aluminum	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<1
Antimony	ppm	ASTM D5185m		<b>---</b>	---	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>6</b>	61	13
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>59</b>	60	60
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>941</b>	1125	917
Calcium	ppm	ASTM D5185m		<b>1056</b>	968	1254
Phosphorus	ppm	ASTM D5185m		<b>1005</b>	1118	1059
Zinc	ppm	ASTM D5185m		<b>1082</b>	1320	1262
Sulfur	ppm	ASTM D5185m		<b>3512</b>	4224	2738

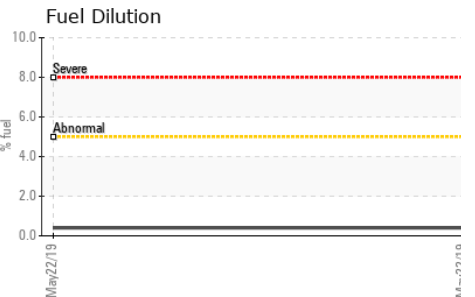
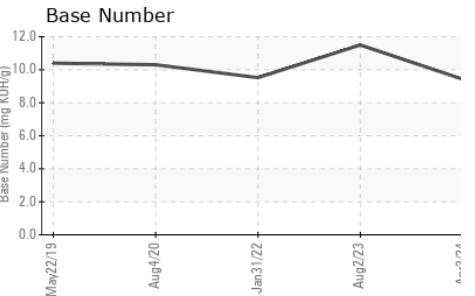
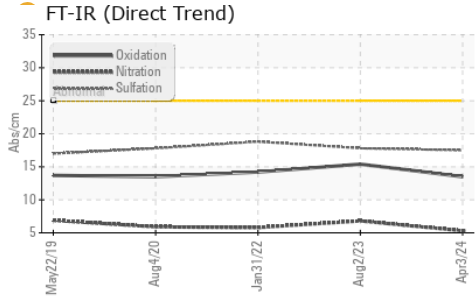
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>2</b>	3	3
Sodium	ppm	ASTM D5185m		<b>2</b>	4	<1
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Fuel	%	ASTM D3524	>5	<b>&lt;1.0</b>	<1.0	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>5.3</b>	6.8	5.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.5</b>	17.8	18.8

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.5</b>	15.4	14.2
Base Number (BN)	mg KOH/g	ASTM D2896		<b>9.42</b>	11.50	9.52



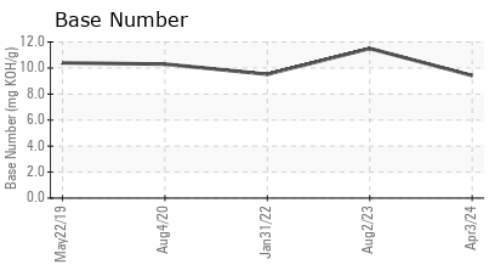
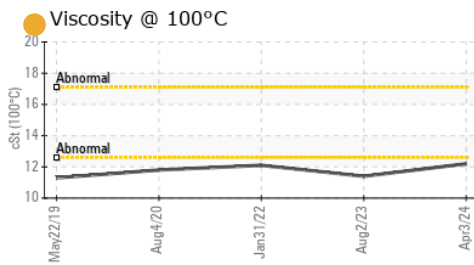
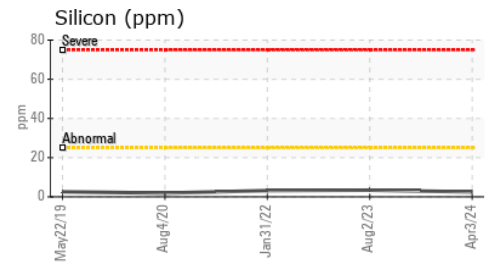
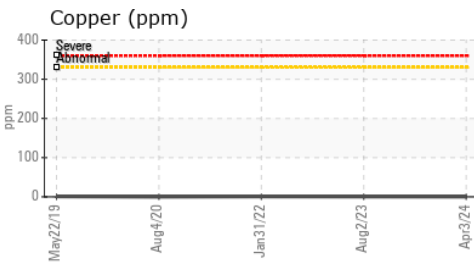
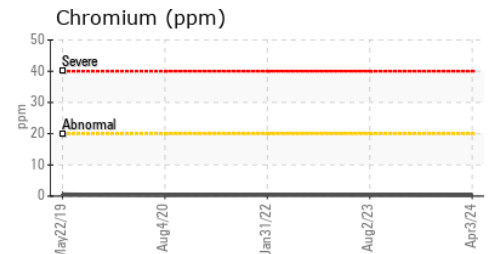
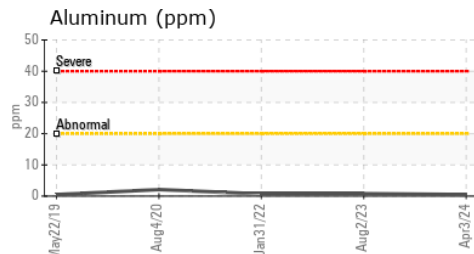
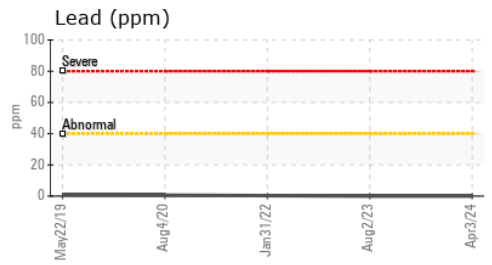
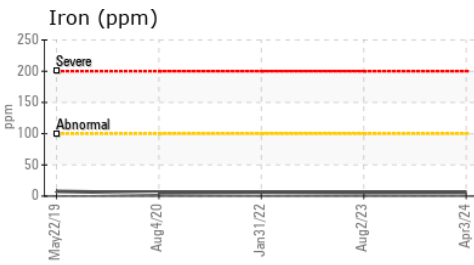
# OIL ANALYSIS REPORT



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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	● 12.2	● 11.4	● 12.1

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RW0005068      **Received** : 19 Apr 2024  
**Lab Number** : 06154660      **Tested** : 23 Apr 2024  
**Unique Number** : 10990083      **Diagnosed** : 23 Apr 2024 - Sean Felton  
**Test Package** : MOB 2 ( Additional Tests: FuelDilution )

**NEWKIRK ELECTRIC**  
 1875 ROBERTS ST.  
 MUSKEGON, MI  
 US 49442

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)