



# OIL ANALYSIS REPORT

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

Area

[811497]

Machine Id

**SPARTAN P-103**

Component

**Front Diesel Engine**

Fluid

**PETRO CANADA SUPREME SYNTHETIC 10W30 (36 LTR)**

## RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill.  
Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0812456</b>	WC0495037	WC898471
Sample Date		Client Info		<b>21 May 2024</b>	10 Mar 2021	26 Nov 2013
Machine Age	kms	Client Info		<b>60793</b>	23087	53309
Oil Age	kms	Client Info		<b>0</b>	0	0
Filter Age	kms	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	N/A	Changed
Filter Changed		Client Info		<b>Changed</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>100	<b>12</b>	18	32
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	1
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	<b>7</b>	7	4
Lead	ppm	ASTM D5185(m)	>40	<b>&lt;1</b>	5	3
Copper	ppm	ASTM D5185(m)	>330	<b>49</b>	187	4
Tin	ppm	ASTM D5185(m)	>15	<b>4</b>	9	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>LIGHT</b>	---	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---

## CONTAMINATION

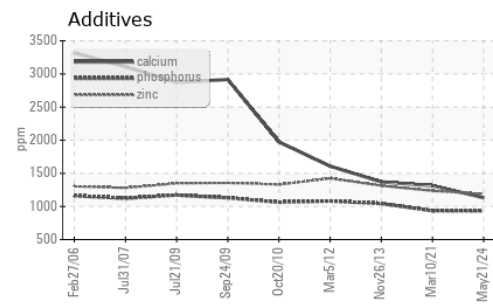
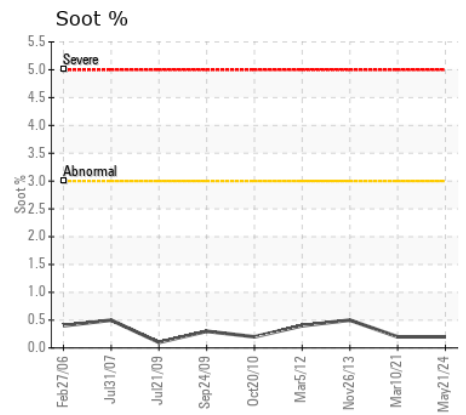
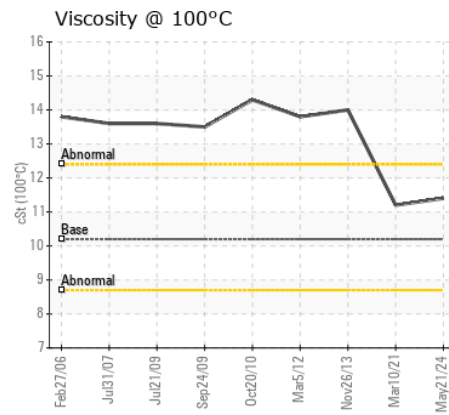
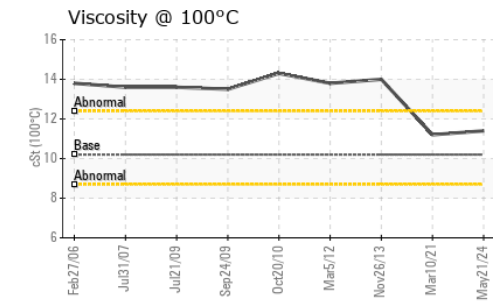
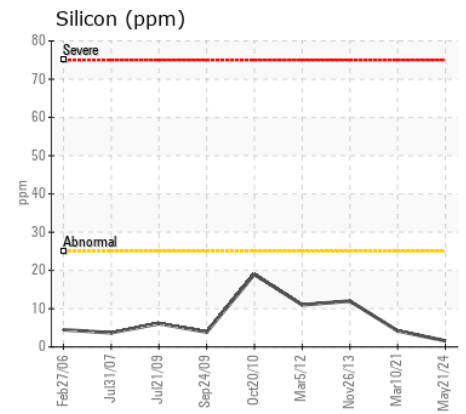
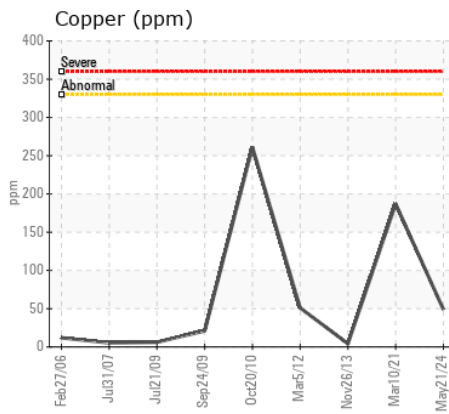
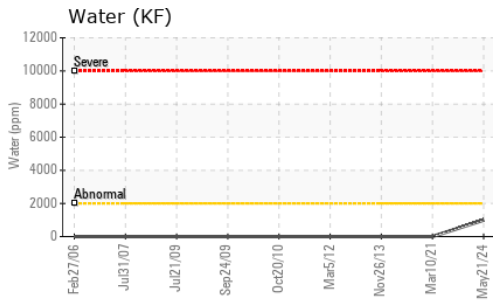
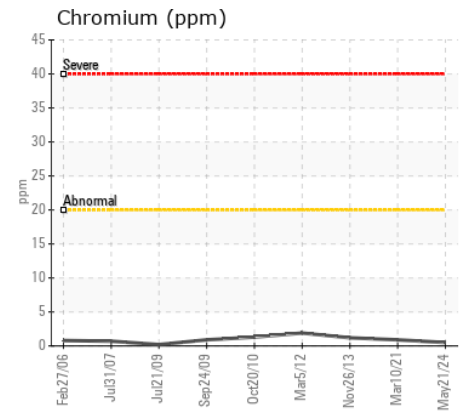
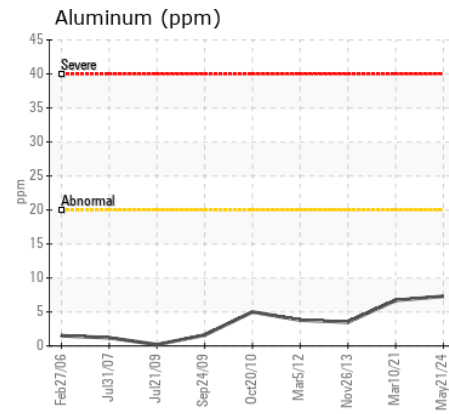
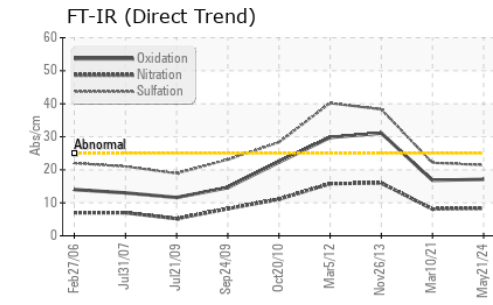
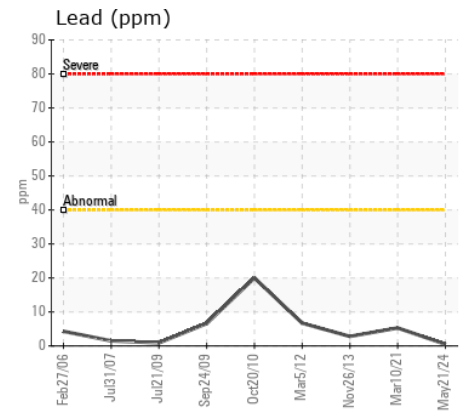
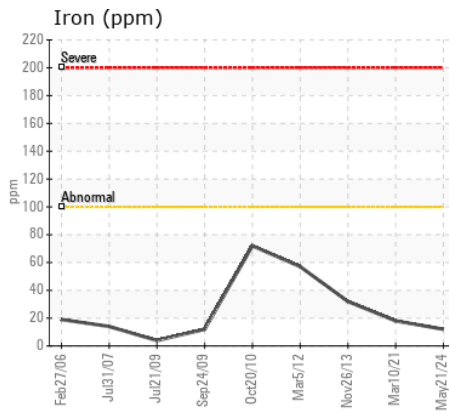
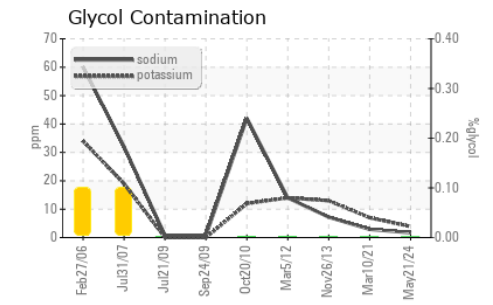
The water content is negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>2</b>	4	12
Potassium	ppm	ASTM D5185(m)	>20	<b>4</b>	7	13
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water	%	ASTM D6304*	>0.2	<b>0.099</b>	---	---
ppm Water	ppm	ASTM D6304*	>2000	<b>995</b>	---	---
Glycol	%	ASTM D7922*		<b>0.0</b>	0.0	0.0
Soot %	%	ASTM D7844*	>3	<b>0.2</b>	0.2	0.5
Nitration	Abs/cm	ASTM D7624*	>20	<b>8.3</b>	8.1	16.0
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>21.4</b>	22.1	38.3
Silt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Debris	scalar	Visual*	NONE	<b>NONE</b>	---	---
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Appearance	scalar	Visual*	NORML	<b>NORML</b>	---	---
Odor	scalar	Visual*	NORML	<b>NORML</b>	---	---
Emulsified Water	scalar	Visual*	>0.2	<b>.2%</b>	NEG	NEG

## FLUID CONDITION

Additive levels indicate the addition of a different brand, or type of oil.  
The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		<b>2</b>	3	7
Boron	ppm	ASTM D5185(m)	220	<b>1</b>	2	12
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	75	<b>61</b>	51	52
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	2	<1
Magnesium	ppm	ASTM D5185(m)	550	<b>972</b>	803	810
Calcium	ppm	ASTM D5185(m)	1301	<b>1132</b>	1313	1371
Phosphorus	ppm	ASTM D5185(m)	804	<b>932</b>	935	1044
Zinc	ppm	ASTM D5185(m)	794	<b>1188</b>	1235	1313
Sulfur	ppm	ASTM D5185(m)	2728	<b>2187</b>	2379	3292
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>17.1</b>	16.8	31.1
Visc @ 100°C	cSt	ASTM D7279(m)	10.2	<b>11.4</b>	11.2	14.0



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0812456  
**Lab Number** : 02640631  
**Unique Number** : 5789793  
**Test Package** : MOB 1 ( Additional Tests: Glycol, KF, Visual )

**CITY OF MISSISSAUGA FIRE DEPT**  
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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.*