



WEAR	SEVERE
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
INTERNATIONAL 01-30
Component
Diesel Engine
Fluid
PETRO CANADA 10W40 (--- GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PC0083274	PC0017696	---
Sample Date		Client Info		15 May 2024	08 Jun 2021	---
Machine Age	kms	Client Info		379892	9650	---
Oil Age	kms	Client Info		18097	0	---
Filter Age	kms	Client Info		18097	0	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				SEVERE	NORMAL	---

WEAR

Iron ppm levels are severe. PQ levels are severe. Cylinder, crank, or cam shaft wear is indicated. The very high ferrous density (PQ) index indicates that severe wear is occurring.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
Iron	ppm	ASTM D5185(m)	>100	▲ 283	49	---
Chromium	ppm	ASTM D5185(m)	>20	2	<1	---
Nickel	ppm	ASTM D5185(m)	>4	3	1	---
Titanium	ppm	ASTM D5185(m)		0	0	---
Silver	ppm	ASTM D5185(m)	>3	0	0	---
Aluminum	ppm	ASTM D5185(m)	>20	5	2	---
Lead	ppm	ASTM D5185(m)	>40	10	3	---
Copper	ppm	ASTM D5185(m)	>330	8	4	---
Tin	ppm	ASTM D5185(m)	>15	1	<1	---
Vanadium	ppm	ASTM D5185(m)		0	0	---
White Metal	scalar	Visual*	NONE	VLITE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

CONTAMINATION

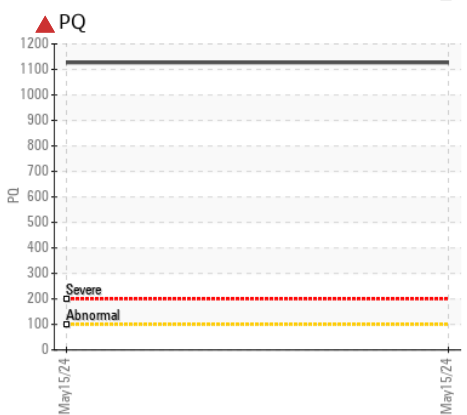
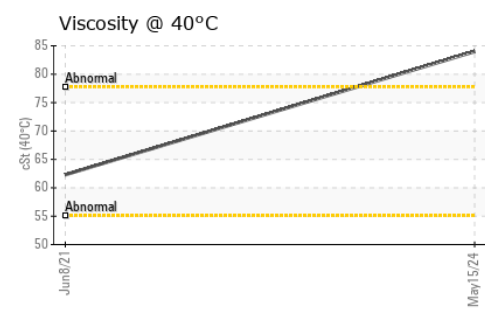
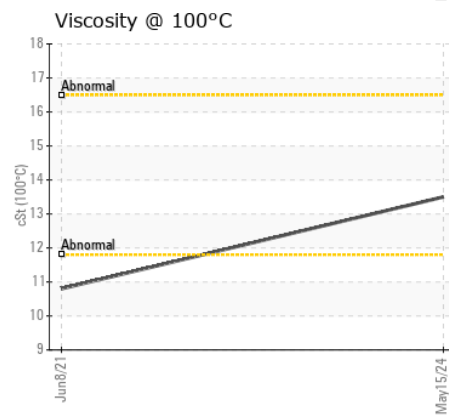
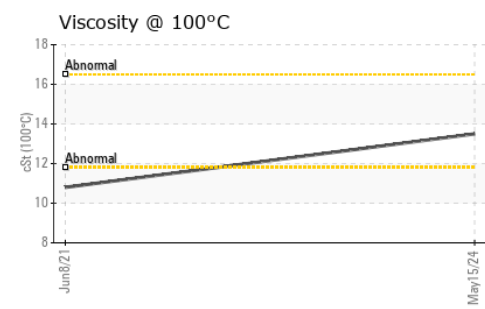
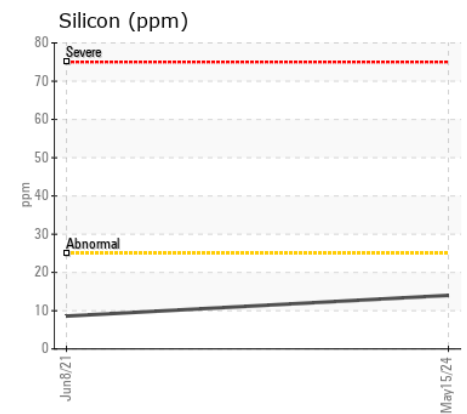
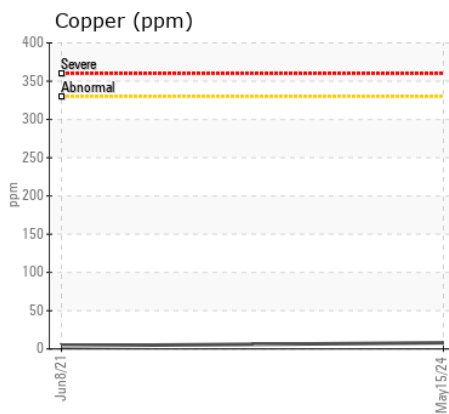
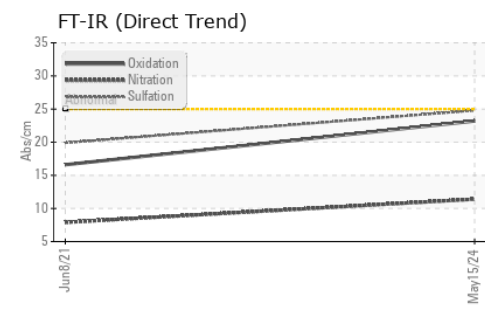
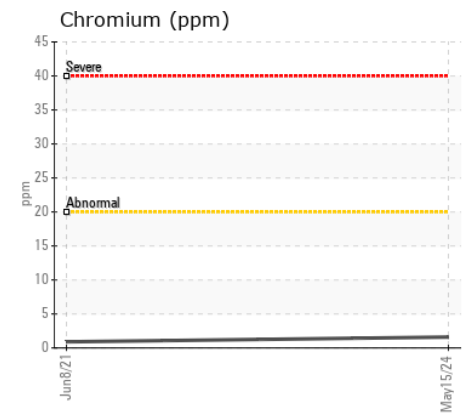
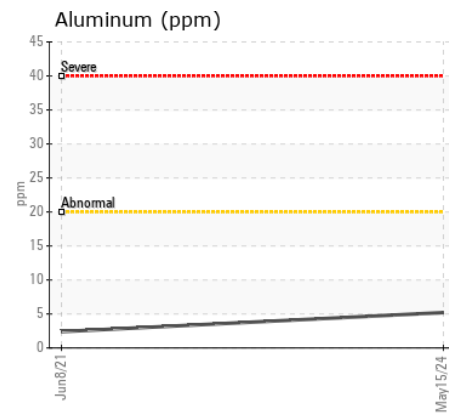
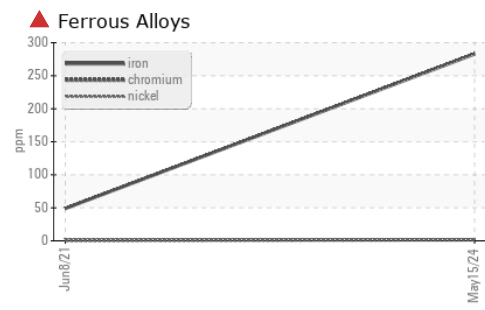
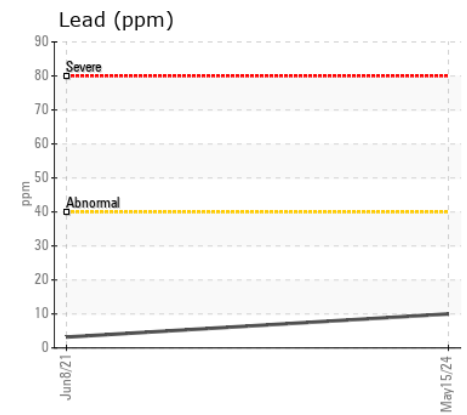
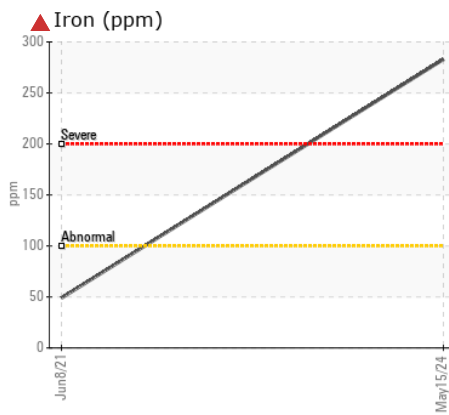
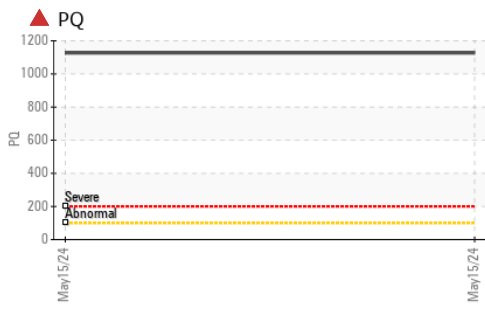
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	14	9	---
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	---
Fuel		WC Method	>2.0	<1.0	0.7	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	ASTM D7844*	>3	1.1	0.6	---
Nitration	Abs/cm	ASTM D7624*	>20	11.4	7.9	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	24.8	19.9	---
Silt	scalar	Visual*	NONE	VLITE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	---	---
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	---

FLUID CONDITION

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185(m)	>20	5	3	---
Boron	ppm	ASTM D5185(m)		40	17	---
Barium	ppm	ASTM D5185(m)		0	0	---
Molybdenum	ppm	ASTM D5185(m)		52	49	---
Manganese	ppm	ASTM D5185(m)		2	<1	---
Magnesium	ppm	ASTM D5185(m)		839	754	---
Calcium	ppm	ASTM D5185(m)		1394	1436	---
Phosphorus	ppm	ASTM D5185(m)		1043	1094	---
Zinc	ppm	ASTM D5185(m)		1282	1247	---
Sulfur	ppm	ASTM D5185(m)		2814	2820	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	23.2	16.6	---
Visc @ 40°C	cSt	ASTM D7279(m)		84.0	62.3	---
Visc @ 100°C	cSt	ASTM D7279(m)		13.5	10.8	---
Viscosity Index (VI)	Scale	ASTM D2270*		163	165	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0083274
Lab Number : 02636903
Unique Number : 5786065
Test Package : MOB 1 (Additional Tests: KV40, PQ, VI, Visual)

Received : 22 May 2024
Tested : 22 May 2024
Diagnosed : 22 May 2024 - Kevin Marson

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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.