



Machine Id
25076 P313

Component
Diesel Engine

Fluid
PETRO CANADA 15W40 (22 LTR)



DIAGNOSIS

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.

Wear

Iron ppm levels are severe. Cylinder, crank, or cam shaft wear is indicated.

Contamination

Light concentration of carbon/soot present in the oil.

Fluid Condition

Viscosity of sample indicates oil is within SAE 20W50 range, advise investigate. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		PC0075223	---	---
Sample Date	Client Info		27 Jul 2023	---	---
Machine Age	hrs	Client Info	11388	---	---
Oil Age	hrs	Client Info	0	---	---
Oil Changed	Client Info		N/A	---	---
Sample Status			SEVERE	---	---

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	---	---
Water	WC Method	>0.2	NEG	---	---

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184*		0	---	---
Iron	ppm	ASTM D5185(m) >75	122	---	---
Chromium	ppm	ASTM D5185(m) >5	4	---	---
Nickel	ppm	ASTM D5185(m) >4	<1	---	---
Titanium	ppm	ASTM D5185(m) >2	0	---	---
Silver	ppm	ASTM D5185(m) >2	<1	---	---
Aluminum	ppm	ASTM D5185(m) >15	5	---	---
Lead	ppm	ASTM D5185(m) >25	<1	---	---
Copper	ppm	ASTM D5185(m) >100	12	---	---
Tin	ppm	ASTM D5185(m) >4	<1	---	---
Antimony	ppm	ASTM D5185(m)	0	---	---
Vanadium	ppm	ASTM D5185(m)	0	---	---
Beryllium	ppm	ASTM D5185(m)	0	---	---
Cadmium	ppm	ASTM D5185(m)	0	---	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	12	---	---
Barium	ppm	ASTM D5185(m)	0	---	---
Molybdenum	ppm	ASTM D5185(m)	70	---	---
Manganese	ppm	ASTM D5185(m)	<1	---	---
Magnesium	ppm	ASTM D5185(m)	967	---	---
Calcium	ppm	ASTM D5185(m)	1136	---	---
Phosphorus	ppm	ASTM D5185(m)	1008	---	---
Zinc	ppm	ASTM D5185(m)	1234	---	---
Sulfur	ppm	ASTM D5185(m)	2342	---	---
Lithium	ppm	ASTM D5185(m)	<1	---	---

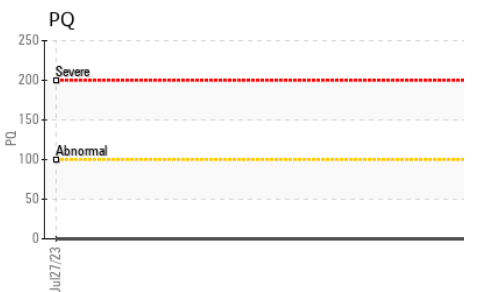
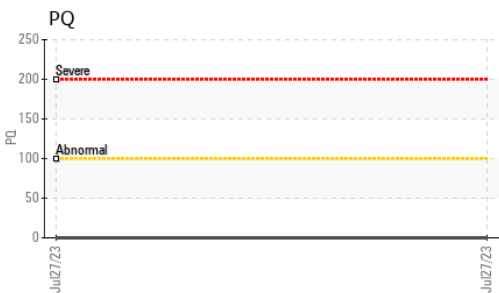
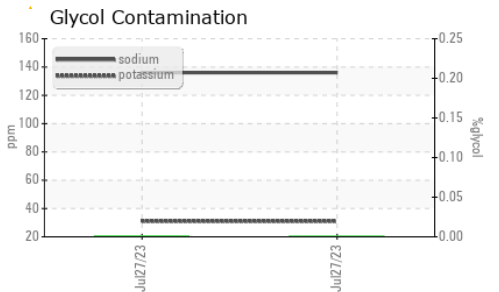
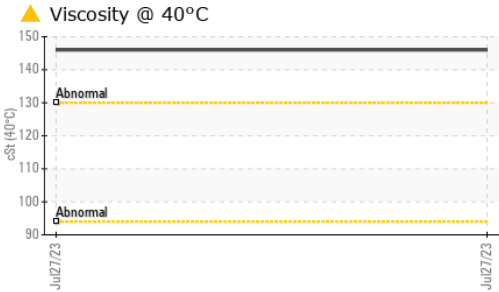
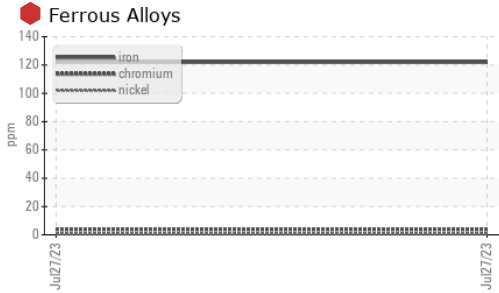
CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	16	---	---
Sodium	ppm	ASTM D5185(m)	136	---	---
Potassium	ppm	ASTM D5185(m) >20	31	---	---
Glycol	%	ASTM D7922*	0.0	---	---

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >6	2.4	---	---
Nitration	Abs/cm	ASTM D7624* >20	21.8	---	---
Sulfation	Abs.1mm	ASTM D7415* >30	43.3	---	---

OIL ANALYSIS REPORT

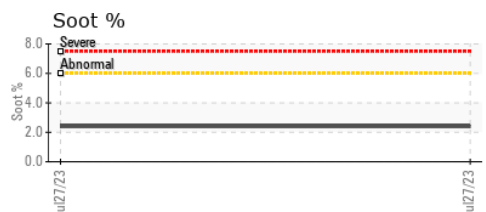
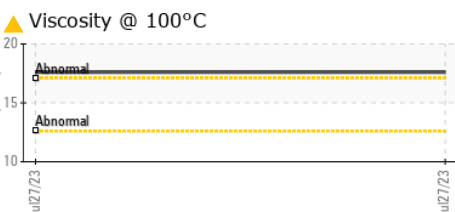
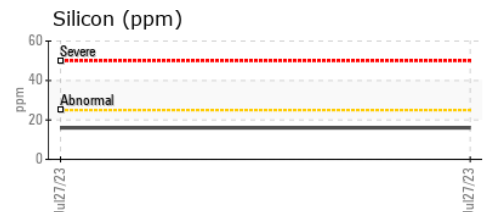
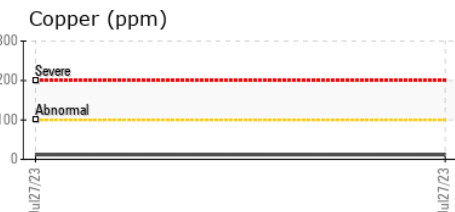
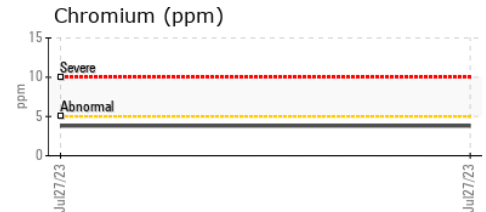
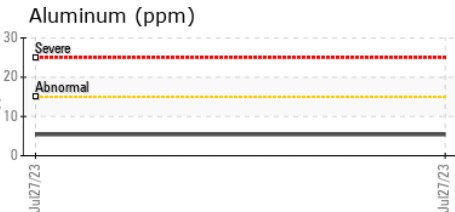
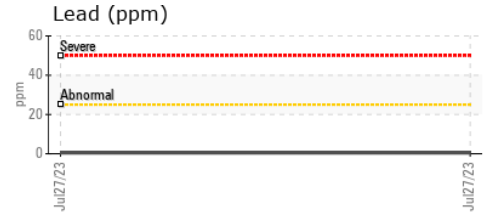
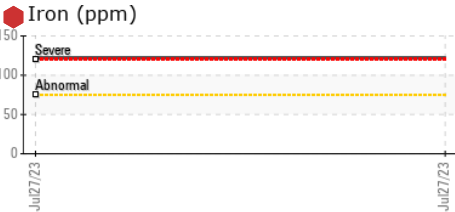


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	54.4	---	---

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---
Precipitate	scalar	Visual*	NONE	NONE	---	---
Silt	scalar	Visual*	NONE	NONE	---	---
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	---	---
Free Water	scalar	Visual*		NEG	---	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)		▲ 146	---	---
Visc @ 100°C	cSt	ASTM D7279(m)		▲ 17.6	---	---
Viscosity Index (VI)	Scale	ASTM D2270*		132	---	---

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0075223 **Received** : 15 Dec 2023
Lab Number : **02603432** **Diagnosed** : 18 Dec 2023
Unique Number : 5696517 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: Glycol, KV40, PQ, VI, Visual)

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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.