

Machine Id
250004
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

We advise that you check the fuel injection system. 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		GFL0096826	GFL0096850	GFL0084044
Sample Date		Client Info		04 Jun 2024	15 Feb 2024	14 Jun 2023
Machine Age	hrs	Client Info		14889	13391	10124
Oil Age	hrs	Client Info		600	0	0
Filter Age	hrs	Client Info		600	600	600
Oil Changed		Client Info		Changed	N/A	N/A
Filter Changed		Client Info		Changed	N/A	N/A
Sample Status				SEVERE	SEVERE	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	29	38	10
Chromium	ppm	ASTM D5185(m)	>20	2	2	<1
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	0
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)	>3	3	1	<1
Aluminum	ppm	ASTM D5185(m)	>20	1	1	<1
Lead	ppm	ASTM D5185(m)	>40	0	0	0
Copper	ppm	ASTM D5185(m)	>330	<1	<1	<1
Tin	ppm	ASTM D5185(m)	>15	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---

CONTAMINATION

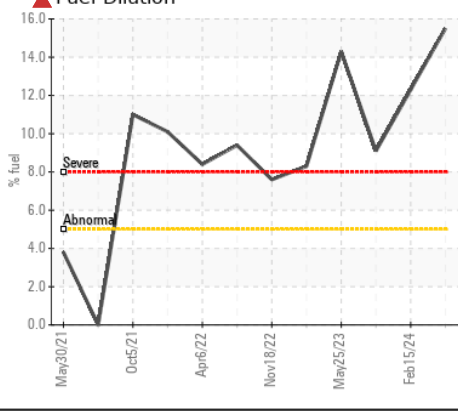
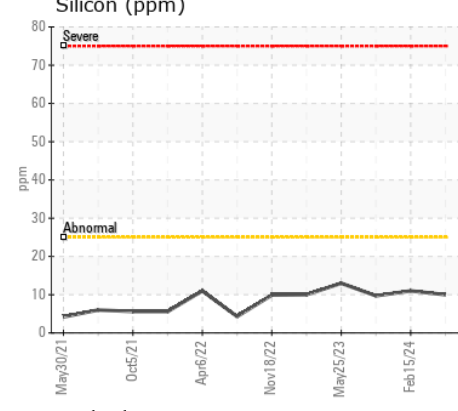
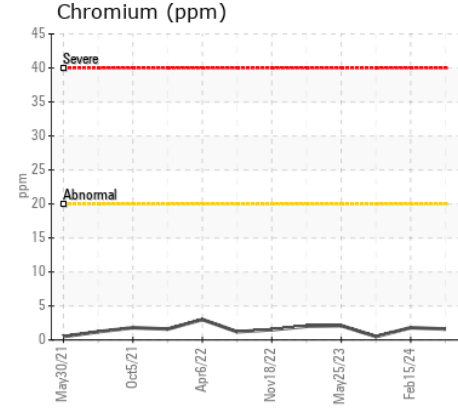
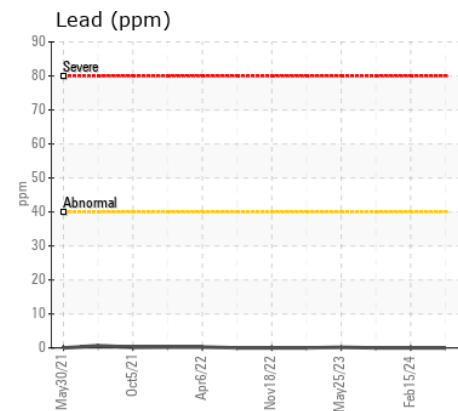
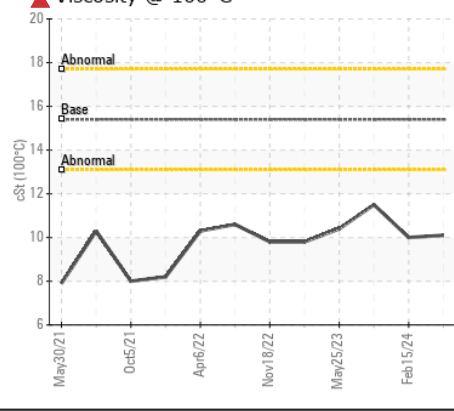
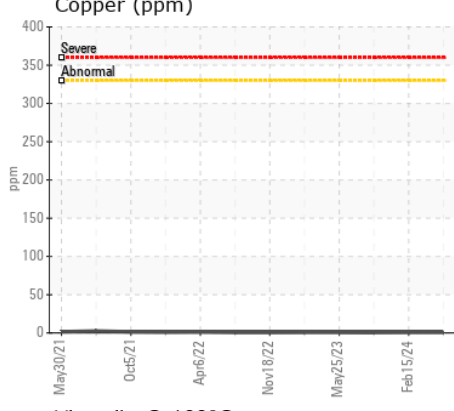
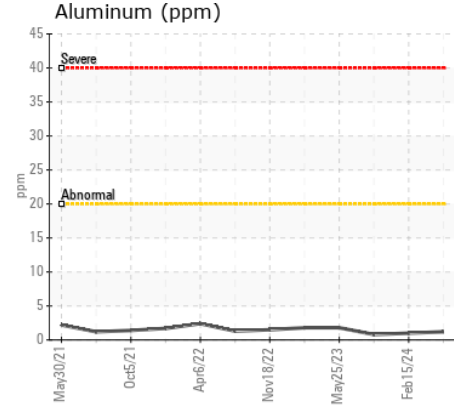
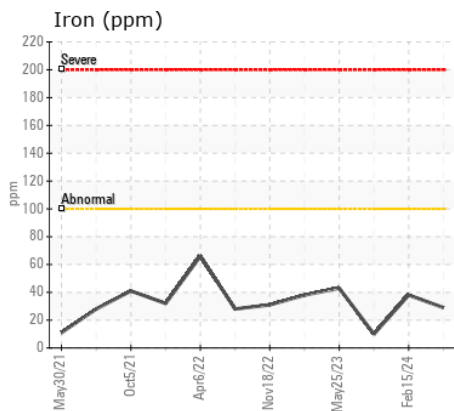
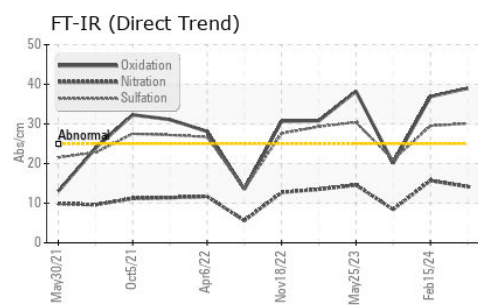
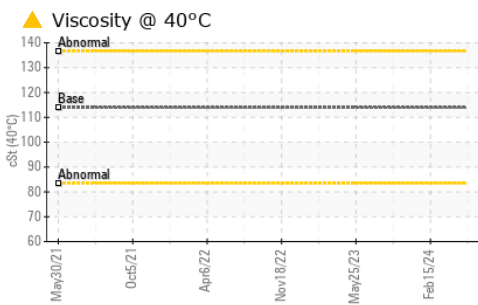
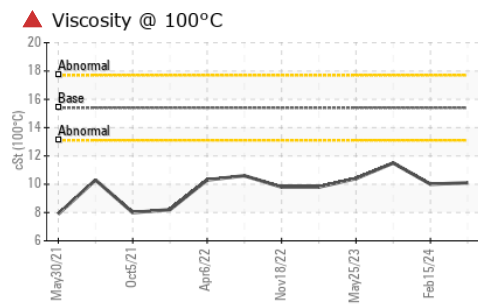
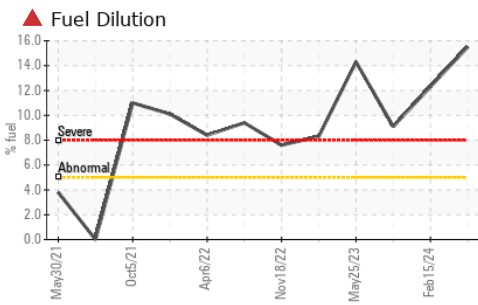
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185(m)	>25	10	11	10
Potassium	ppm	ASTM D5185(m)	>20	4	<1	0
Fuel	%	ASTM D7593*	>5	▲ 15.5	▲ 12.3	▲ 9.1
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	0.0	NEG
Soot %	%	ASTM D7844*	>3	0.3	0.4	0.1
Nitration	Abs/cm	ASTM D7624*	>20	14.2	15.7	8.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	30.1	29.5	20.9
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	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	▲ .2%	NEG

FLUID CONDITION

Viscosity of sample indicates oil is within SAE 5W30 range, advise investigate. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		9	6	4
Boron	ppm	ASTM D5185(m)	0	2	1	4
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	49	54	54
Manganese	ppm	ASTM D5185(m)	0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	785	887	865
Calcium	ppm	ASTM D5185(m)	1070	886	964	930
Phosphorus	ppm	ASTM D5185(m)	1150	810	896	963
Zinc	ppm	ASTM D5185(m)	1270	992	1073	1057
Sulfur	ppm	ASTM D5185(m)	2060	1919	1998	2276
Oxidation	Abs/.1mm	ASTM D7414*	>25	39.0	36.9	20.1
Visc @ 40°C	cSt	ASTM D7279(m)	113.9	▲ 61.9	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	▲ 10.1	▲ 10.0	▲ 11.5
Viscosity Index (VI)	Scale	ASTM D2270*	142	149	---	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0096826
Lab Number : 02642259
Unique Number : 5799798
Test Package : MOB 1 (Additional Tests: KV40, PercentFuel, 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.