



Machine Id
0547
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON HP 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		GFL0117317	GFL0099536	GFL0091578
Sample Date		Client Info		11 Apr 2024	20 Dec 2023	10 Oct 2023
Machine Age	hrs	Client Info		19566	349325	341239
Oil Age	hrs	Client Info		532	0	0
Filter Age	hrs	Client Info		532	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	SEVERE	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	52	24	27
Chromium	ppm	ASTM D5185(m)	>20	2	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	4	3	2
Lead	ppm	ASTM D5185(m)	>40	4	2	4
Copper	ppm	ASTM D5185(m)	>330	5	2	3
Tin	ppm	ASTM D5185(m)	>15	3	1	1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

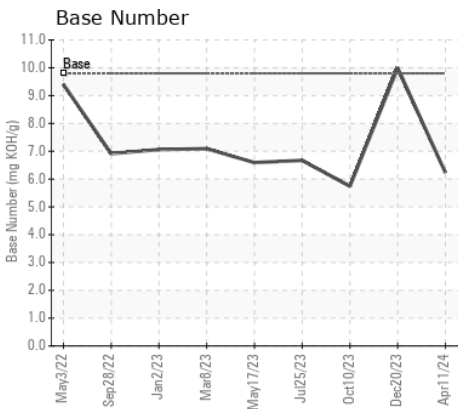
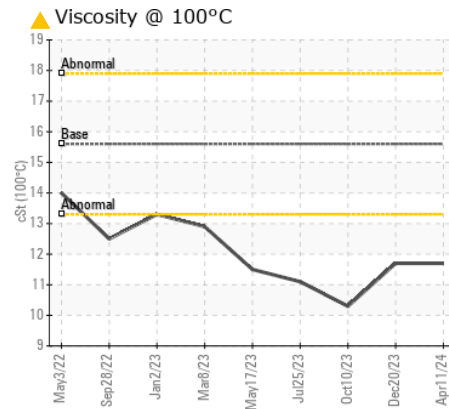
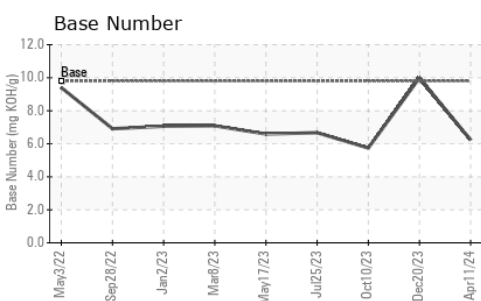
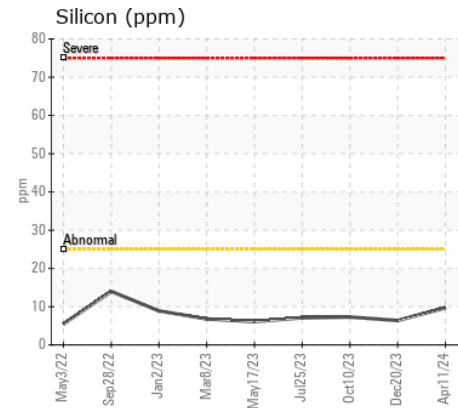
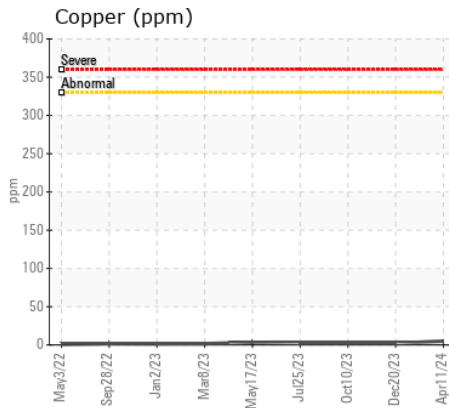
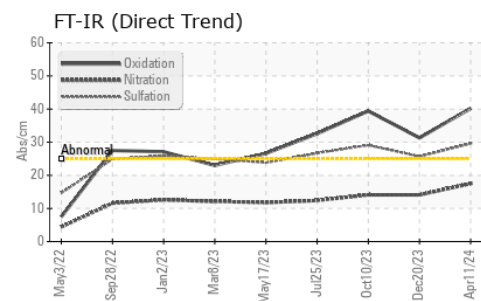
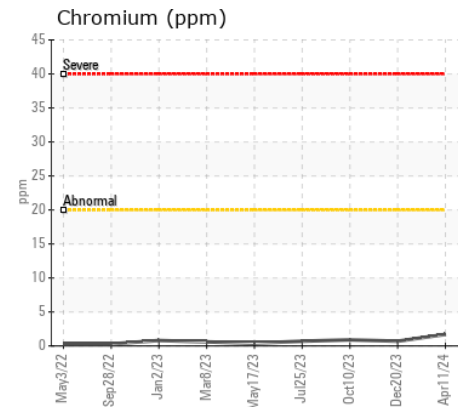
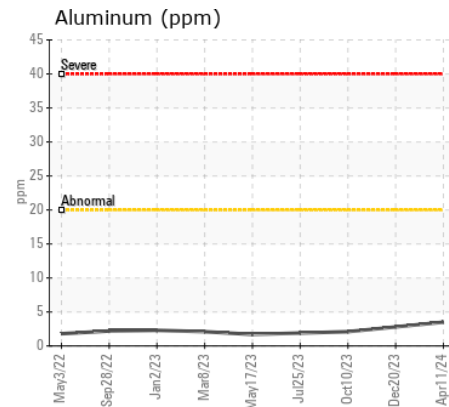
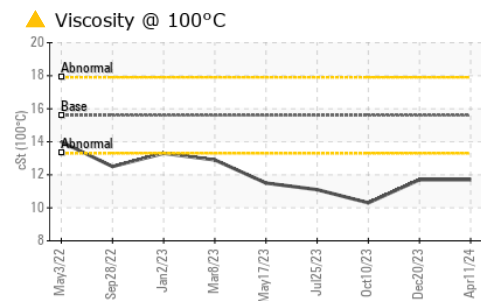
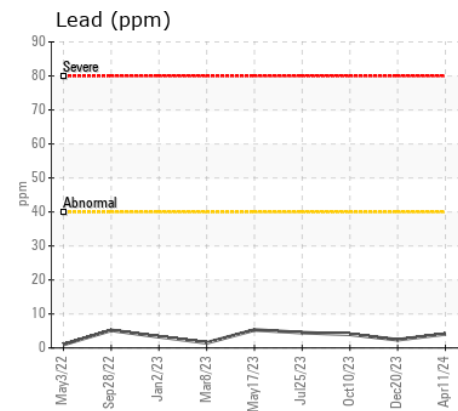
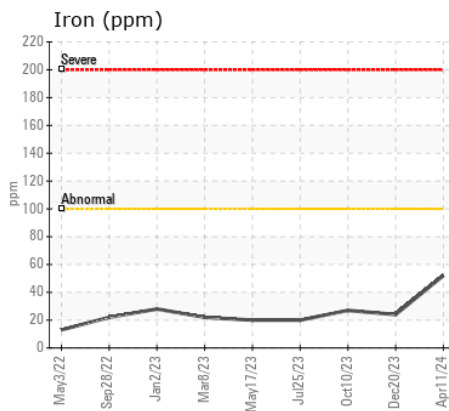
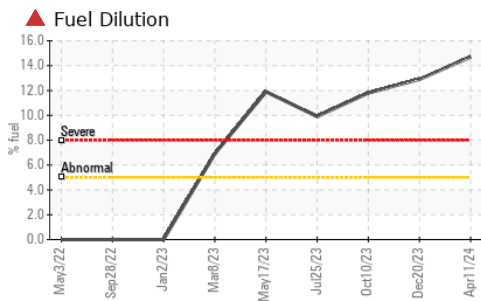
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185(m)	>25	10	6	7
Potassium	ppm	ASTM D5185(m)	>20	<1	3	<1
Fuel	%	ASTM D7593*	>5	▲ 14.7	▲ 12.9	▲ 11.8
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	1	0.6	0.6
Nitration	Abs/cm	ASTM D7624*	>20	17.5	14.1	14.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	29.6	25.7	29.1
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		3	1	2
Boron	ppm	ASTM D5185(m)	0	2	2	2
Barium	ppm	ASTM D5185(m)	0	0	0	<1
Molybdenum	ppm	ASTM D5185(m)	60	47	48	47
Manganese	ppm	ASTM D5185(m)	0	<1	0	0
Magnesium	ppm	ASTM D5185(m)	1010	767	767	746
Calcium	ppm	ASTM D5185(m)	1070	853	907	823
Phosphorus	ppm	ASTM D5185(m)	1150	793	844	775
Zinc	ppm	ASTM D5185(m)	1270	942	975	934
Sulfur	ppm	ASTM D5185(m)	2060	1858	2140	1880
Oxidation	Abs/.1mm	ASTM D7414*	>25	40.2	31.3	39.4
Base Number (BN)	mg KOH/g	ASTM D2896*	9.8	6.23	9.99	5.74
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	▲ 11.7	▲ 11.7	▲ 10.3



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0117317
Lab Number : 02629130
Unique Number : 5762262
Test Package : MOB 2 (Additional Tests: PercentFuel)

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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.