



Area
GFL216
Machine Id
7177
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (21 LTR)

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		GFL0061108	GFL0088945	GFL0088927
Sample Date		Client Info		06 Oct 2023	28 Aug 2023	02 Aug 2023
Machine Age	kms	Client Info		17035	0	16484
Oil Age	kms	Client Info		383	0	15909
Filter Age	kms	Client Info		383	0	15909
Oil Changed		Client Info		Changed	N/A	Changed
Filter Changed		Client Info		Changed	N/A	Changed
Sample Status				SEVERE	SEVERE	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>130	22	15	39
Chromium	ppm	ASTM D5185(m)	>10	1	<1	2
Nickel	ppm	ASTM D5185(m)	>4	0	0	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	<1	0	0
Aluminum	ppm	ASTM D5185(m)	>20	3	2	4
Lead	ppm	ASTM D5185(m)	>20	<1	0	<1
Copper	ppm	ASTM D5185(m)	>125	<1	<1	2
Tin	ppm	ASTM D5185(m)	>4	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

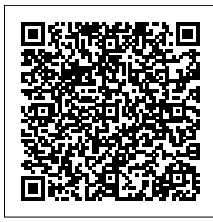
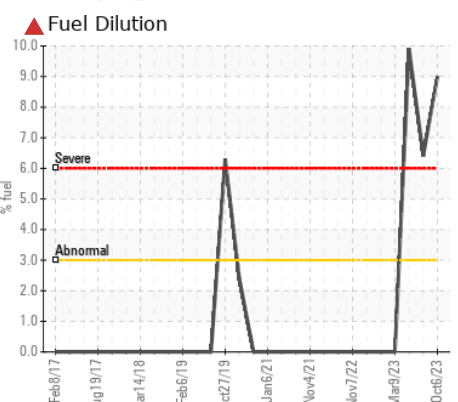
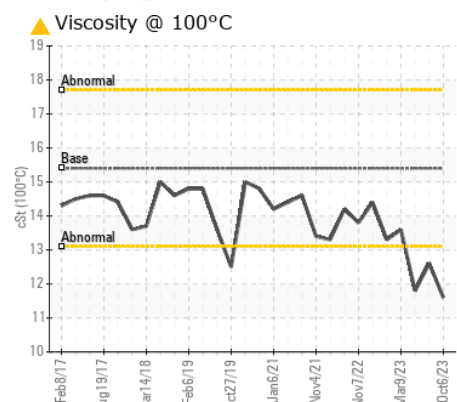
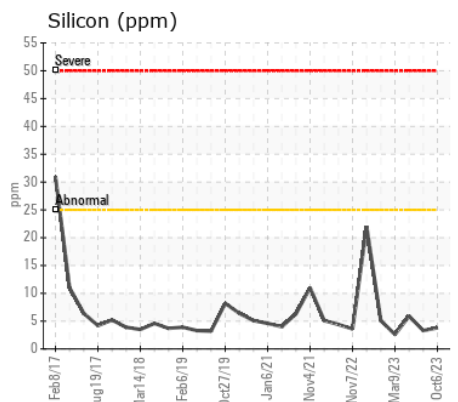
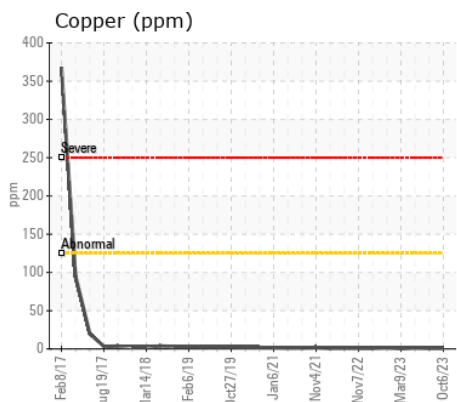
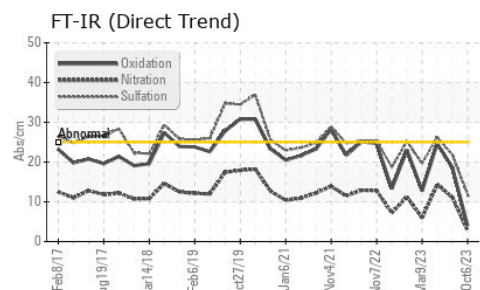
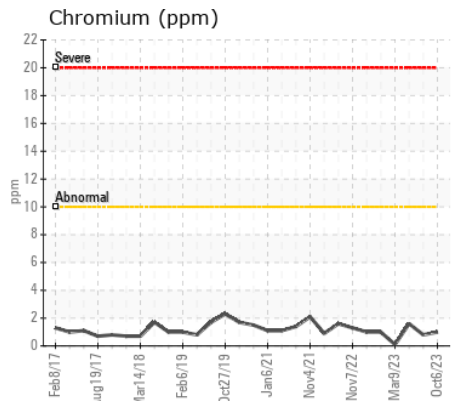
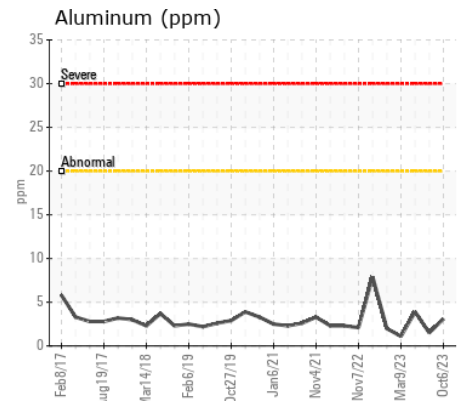
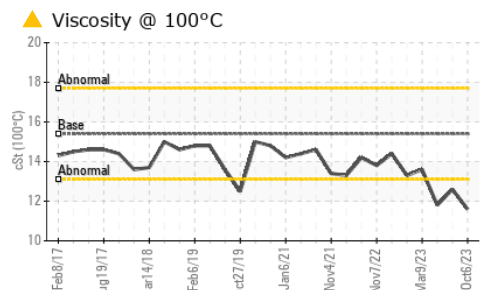
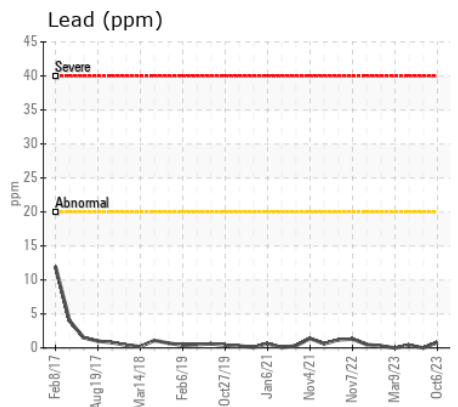
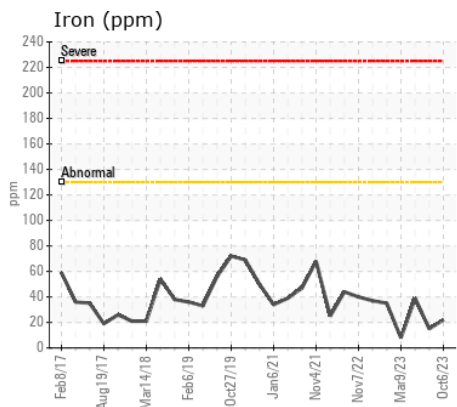
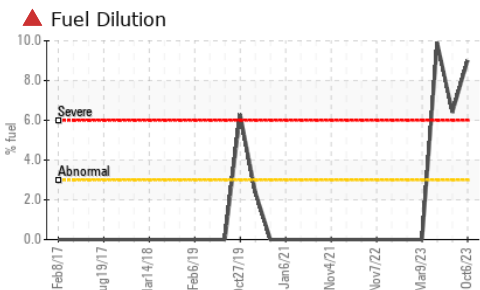
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185(m)	>25	4	3	6
Potassium	ppm	ASTM D5185(m)	>20	4	2	5
Fuel	%	ASTM D7593*	>3.0	▲ 9	▲ 6.4	▲ 9.9
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>6	0	0.4	0.8
Nitration	Abs/cm	ASTM D7624*	>20	2.8	11.1	14.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	11.9	21.8	26.3
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		7	6	7
Boron	ppm	ASTM D5185(m)	0	5	4	4
Barium	ppm	ASTM D5185(m)	0	<1	0	0
Molybdenum	ppm	ASTM D5185(m)	60	59	58	57
Manganese	ppm	ASTM D5185(m)	0	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	903	928	928
Calcium	ppm	ASTM D5185(m)	1070	988	1009	988
Phosphorus	ppm	ASTM D5185(m)	1150	937	1021	1007
Zinc	ppm	ASTM D5185(m)	1270	1127	1140	1147
Sulfur	ppm	ASTM D5185(m)	2060	2337	2441	2246
Oxidation	Abs/.1mm	ASTM D7414*	>25	4.0	18.6	24.6
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	▲ 11.6	▲ 12.6	▲ 11.8



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0061108 **Received** : 11 Oct 2023
Lab Number : 02588155 **Tested** : 12 Oct 2023
Unique Number : 5657221 **Diagnosed** : 12 Oct 2023 - Wes Davis
Test Package : MOB 1 (Additional Tests: PercentFuel)

GFL Environmental - 252 - GTA Hauling
 3668 Weston Road
 North York, ON
 CA M9L 1W2
 Contact: Amanda Cipollone
 acipollone@gflenv.com

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.

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