



Machine Id
8974
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (20 LTR)

RECOMMENDATION

Check for low coolant level. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. No other corrective action is recommended at this time.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0120079	GFL0082361	GFL0064623
Sample Date		Client Info		15 May 2024	10 May 2023	18 Nov 2022
Machine Age	hrs	Client Info		346438	169204	161968
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	SEVERE	ATTENTION

WEAR

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

PQ	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184*		10	---	---
Iron	ppm	ASTM D5185(m)	>90	▲ 269	7	21
Chromium	ppm	ASTM D5185(m)	>20	6	<1	<1
Nickel	ppm	ASTM D5185(m)	>2	2	0	0
Titanium	ppm	ASTM D5185(m)	>2	<1	0	0
Silver	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	16	<1	1
Lead	ppm	ASTM D5185(m)	>40	1	<1	1
Copper	ppm	ASTM D5185(m)	>330	2	<1	<1
Tin	ppm	ASTM D5185(m)	>15	0	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

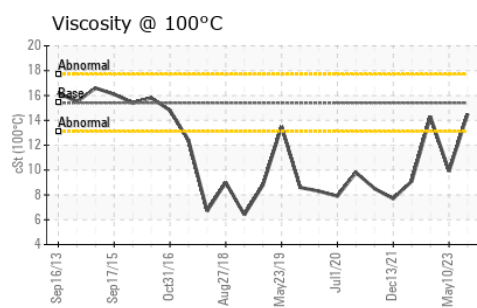
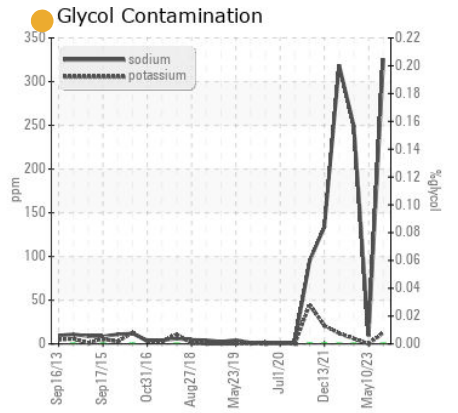
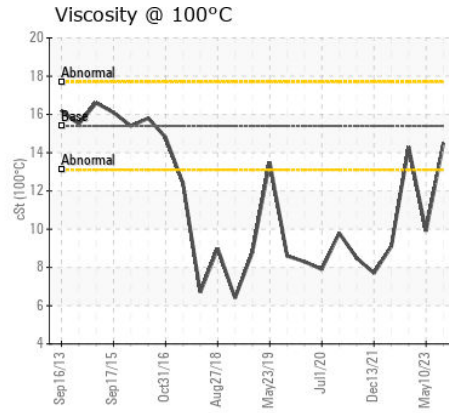
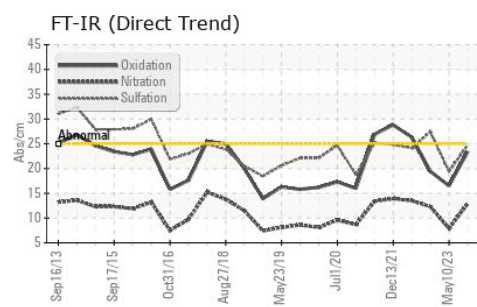
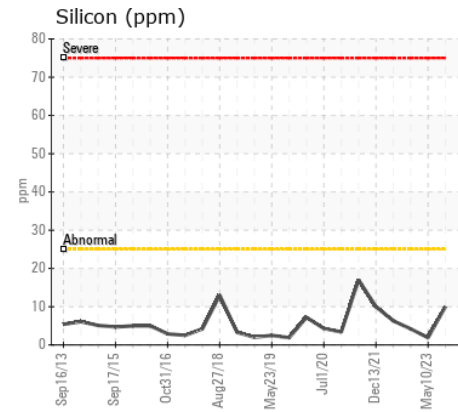
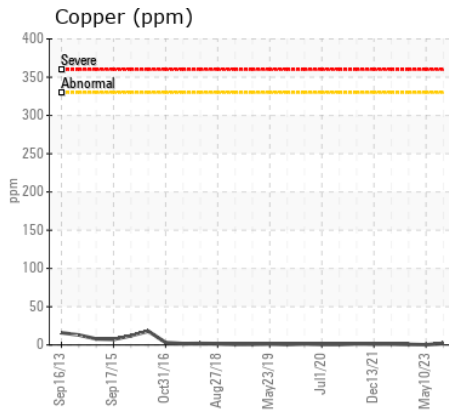
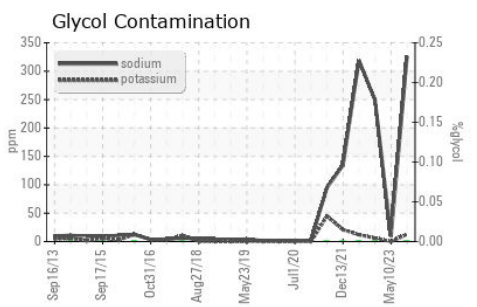
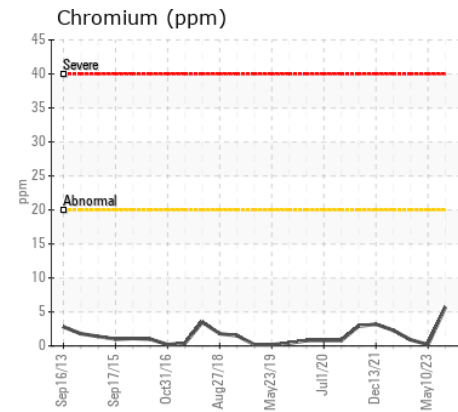
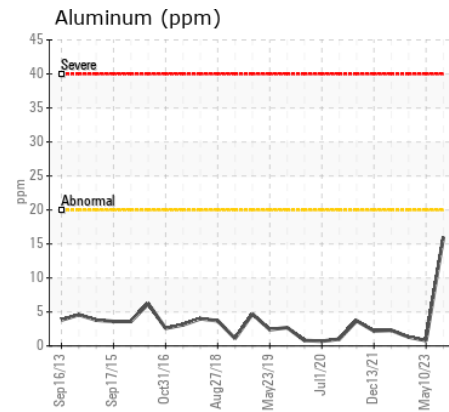
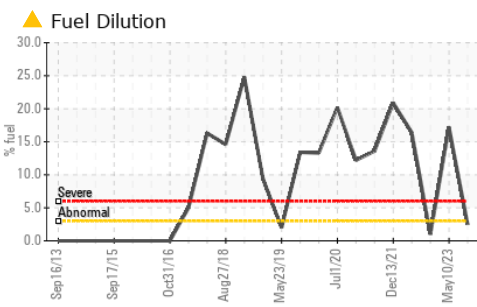
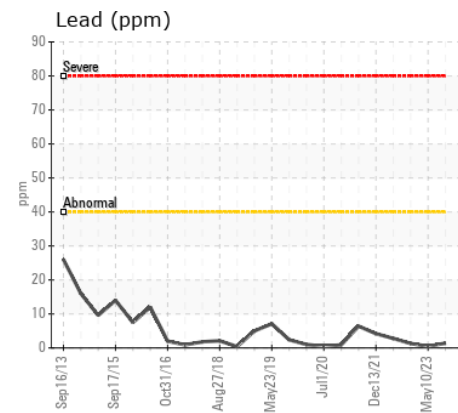
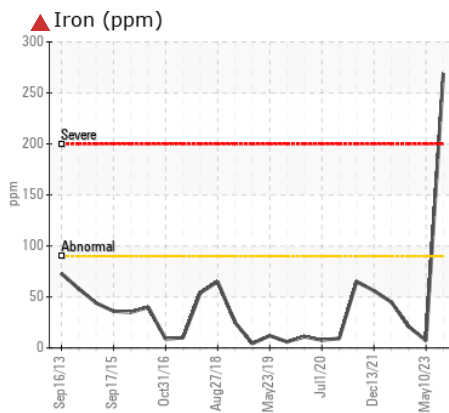
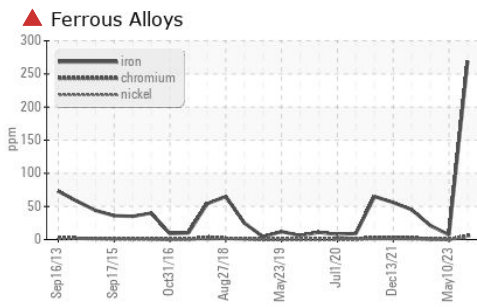
Light fuel dilution occurring. Water treatment chemicals present, indicating slow coolant leak. Test for glycol is negative. No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185(m)	>25	10	2	4
Potassium	ppm	ASTM D5185(m)	>20	13	0	6
Fuel	%	ASTM D7593*	>3.0	▲ 2.5	▲ 17.2	▲ 1
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	ASTM D7922*		0.0	NEG	0.0
Soot %	%	ASTM D7844*	>6	0.5	0	2.4
Nitration	Abs/cm	ASTM D7624*	>20	12.9	7.9	12.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	24.7	19.4	27.4
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

The oil is no longer serviceable as a result of the abnormal and/or severe wear. The condition of the oil is acceptable for the time in service (see recommendation).

Sodium	ppm	ASTM D5185(m)		● 326	9	● 249
Boron	ppm	ASTM D5185(m)	0	3	2	5
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	60	48	61
Manganese	ppm	ASTM D5185(m)	0	1	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	927	764	956
Calcium	ppm	ASTM D5185(m)	1070	1004	858	1079
Phosphorus	ppm	ASTM D5185(m)	1150	944	882	1082
Zinc	ppm	ASTM D5185(m)	1270	1146	942	1178
Sulfur	ppm	ASTM D5185(m)	2060	2322	2158	2582
Oxidation	Abs/.1mm	ASTM D7414*	>25	23.4	16.5	19.4
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	14.5	▲ 9.9	14.3



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0120079 **Received** : 17 May 2024
Lab Number : 02636265 **Tested** : 21 May 2024
Unique Number : 5785427 **Diagnosed** : 21 May 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: Glycol, PercentFuel, PQ)

GFL Environmental - 225 - COT(D2)
 20 Brydon Drive
 Etobicoke, ON
 CA M9W 5R6
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 T: (416)745-8080
 F:

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.