



WEAR
CONTAMINATION
FLUID CONDITION

SEVERE
ABNORMAL
ATTENTION



Machine Id
OR343
Component
Diesel Engine
Fluid
PETRO CANADA DURON HP 15W40 (--- GAL)

RECOMMENDATION

We advise that you check for the source of the coolant leak. 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		GFL0113343	GFL0092257	GFL0010898
Sample Date		Client Info		15 Apr 2024	21 Aug 2023	28 Apr 2021
Machine Age	hrs	Client Info		16058	15462	0
Oil Age	hrs	Client Info		596	500	0
Filter Age	hrs	Client Info		596	500	0
Oil Changed		Client Info		Changed	Changed	N/A
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				SEVERE	ABNORMAL	ABNORMAL

WEAR

Nickel ppm levels are severe. Copper and iron ppm levels are abnormal. Cylinder, crank, or cam shaft wear is indicated. Exhaust valve wear is indicated. Bearing wear is indicated.

PQ		ASTM D8184*	>50	0	---	---
Iron	ppm	ASTM D5185(m)	>37	▲ 48	24	25
Chromium	ppm	ASTM D5185(m)	>11	4	2	2
Nickel	ppm	ASTM D5185(m)	>5	▲ 11	3	4
Titanium	ppm	ASTM D5185(m)		<1	<1	0
Silver	ppm	ASTM D5185(m)	>3	0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>31	25	9	11
Lead	ppm	ASTM D5185(m)	>26	3	5	12
Copper	ppm	ASTM D5185(m)	>26	▲ 32	▲ 83	66
Tin	ppm	ASTM D5185(m)	>4	<1	<1	1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

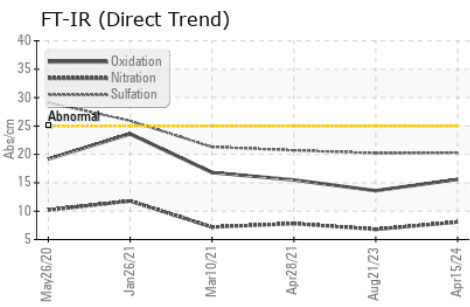
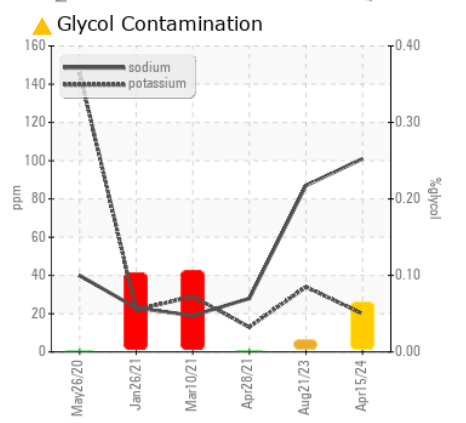
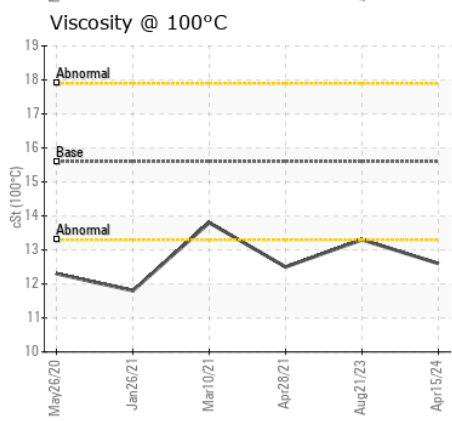
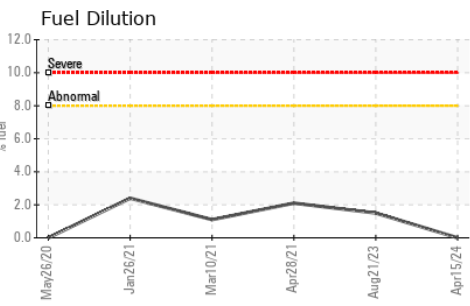
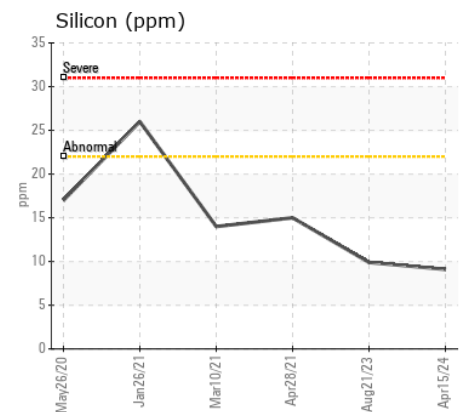
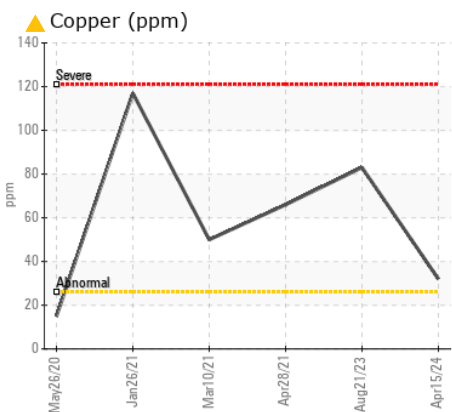
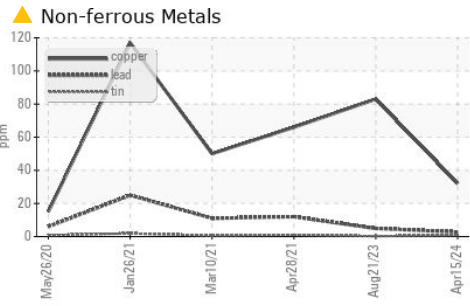
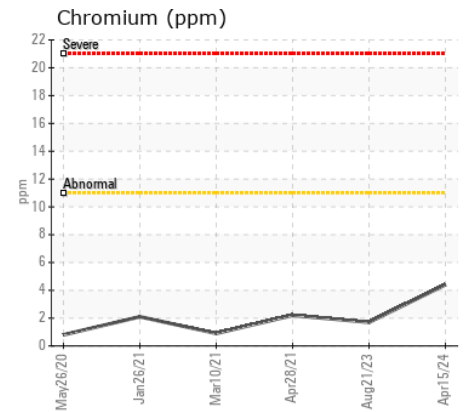
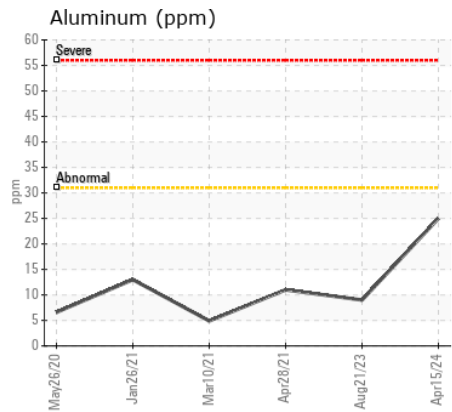
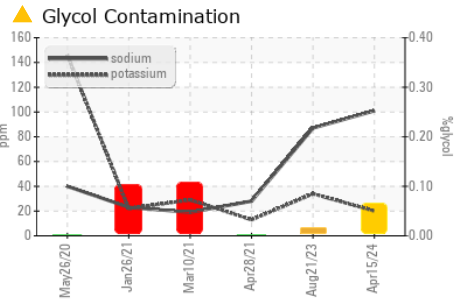
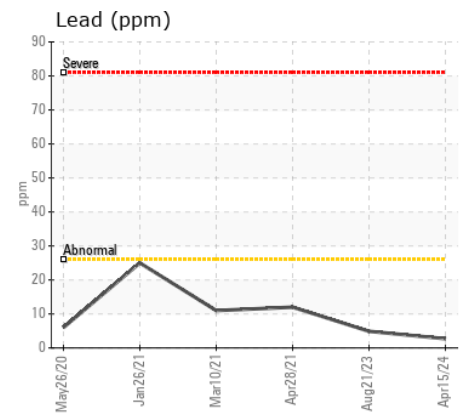
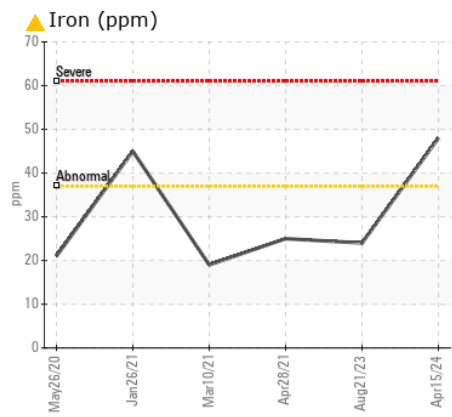
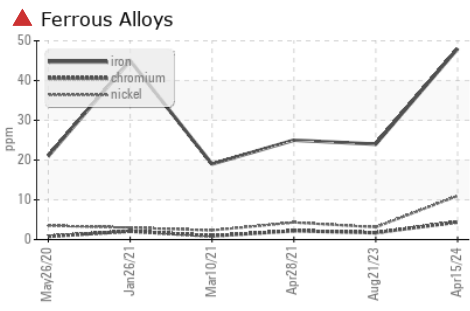
Test for glycol is positive. There is a moderate concentration of glycol present in the oil. Tests indicate that there is no fuel present in the oil.

Silicon	ppm	ASTM D5185(m)	>22	9	10	15
Potassium	ppm	ASTM D5185(m)	>20	▲ 20	▲ 34	13
Fuel	%	ASTM D7593*	>8.0	0.0	1.5	▲ 2.1
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol	%	ASTM D7922*		▲ 0.064	▲ 0.016	0.0
Soot %	%	ASTM D7844*	>3	0.1	0	0.3
Nitration	Abs/cm	ASTM D7624*	>20	8.1	6.8	7.8
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.3	20.2	20.7
Emulsified Water	scalar	Visual*	>0.21	NEG	NEG	NEG

FLUID CONDITION

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185(m)	>31	● 101	● 87	28
Boron	ppm	ASTM D5185(m)	0	5	5	4
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	64	60	85
Manganese	ppm	ASTM D5185(m)	0	1	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	945	928	912
Calcium	ppm	ASTM D5185(m)	1070	1086	971	1111
Phosphorus	ppm	ASTM D5185(m)	1150	921	990	949
Zinc	ppm	ASTM D5185(m)	1270	1159	1084	1180
Sulfur	ppm	ASTM D5185(m)	2060	2034	2393	2460
Oxidation	Abs/.1mm	ASTM D7414*	>25	15.6	13.6	15.5
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	12.6	13.3	▲ 12.5



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0113343
Lab Number : 02630895
Unique Number : 5772048
Test Package : MOB 1 (Additional Tests: FuelDilution, Glycol, PercentFuel, PQ)

Received : 23 Apr 2024
Tested : 24 Apr 2024
Diagnosed : 24 Apr 2024 - Kevin Marson

*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.*

GFL Environmental - 720 - Lafleche - Landfill
 17125 Lafleche Road,
 Moose Creek, ON
 CA K0C 1W0
 Contact: Charles Bergeron
 cbergeron@gflenv.com
 T: (613)538-4853
 F: