



Machine Id
800019
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (20 LTR)

RECOMMENDATION

We advise that you check the fuel injection system. Check for low coolant level. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0110686	GFL0102723	GFL0102683
Sample Date		Client Info		23 Apr 2024	30 Jan 2024	20 Nov 2023
Machine Age	hrs	Client Info		14684	14142	13662
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	Changed	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				SEVERE	SEVERE	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>75	40	40	37
Chromium	ppm	ASTM D5185(m)	>5	3	4	2
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>15	6	4	3
Lead	ppm	ASTM D5185(m)	>25	0	<1	<1
Copper	ppm	ASTM D5185(m)	>100	<1	<1	<1
Tin	ppm	ASTM D5185(m)	>4	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	VLITE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

CONTAMINATION

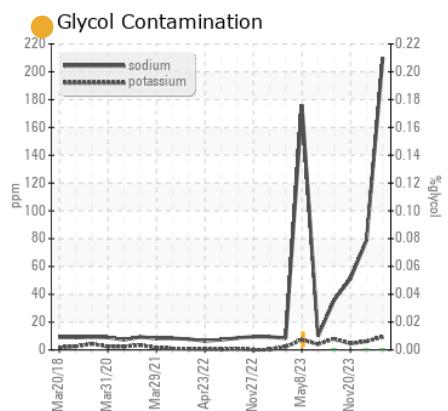
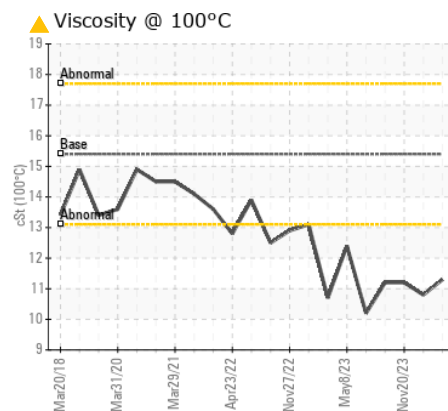
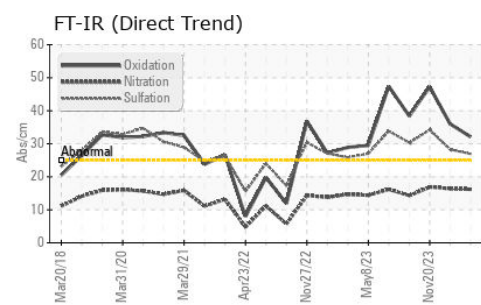
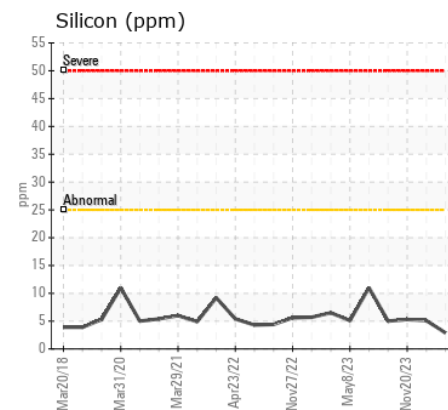
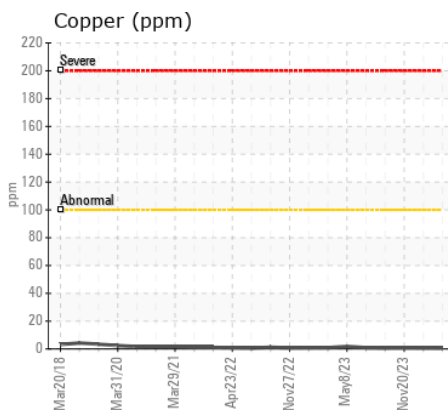
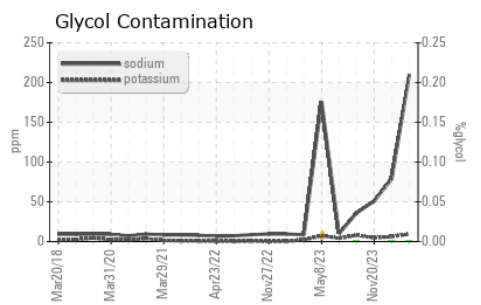
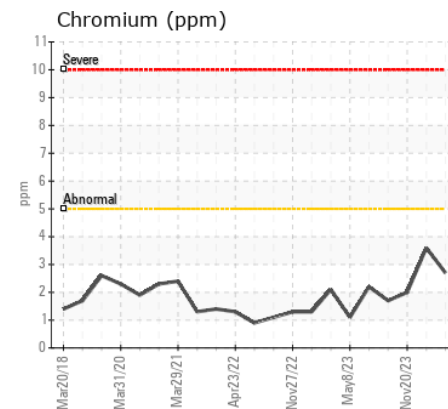
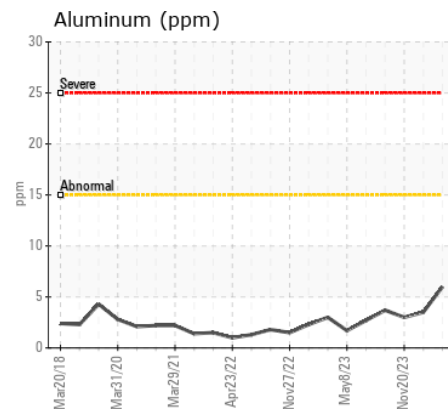
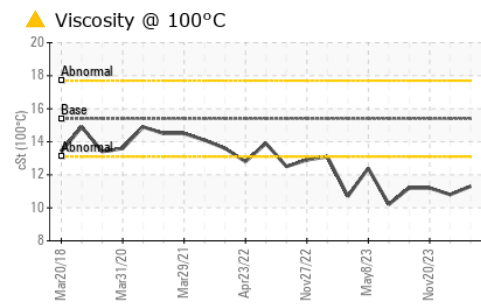
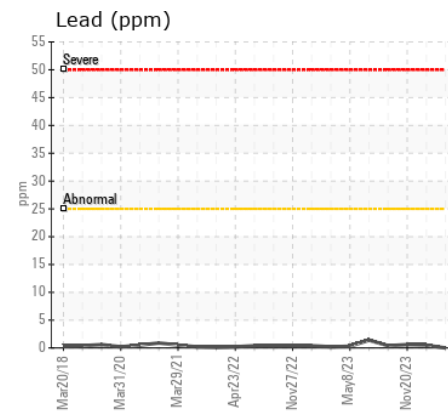
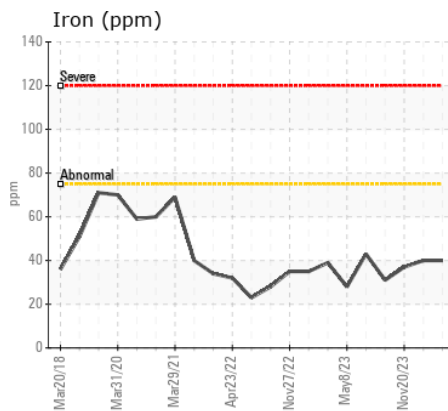
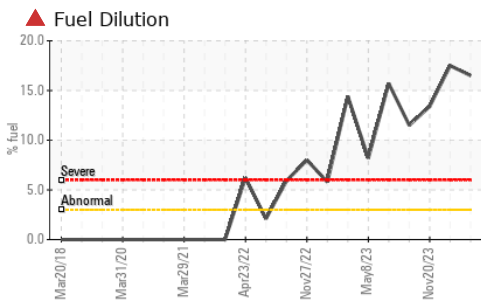
There is a high amount of fuel present in the oil. Water treatment chemicals present, indicating slow coolant leak. Tests confirm the presence of fuel in the oil. Test for glycol is negative.

Silicon	ppm	ASTM D5185(m)	>25	3	5	5
Potassium	ppm	ASTM D5185(m)	>20	9	6	5
Fuel	%	ASTM D7593*	>3.0	▲ 16.5	▲ 17.5	▲ 13.4
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	ASTM D7922*		0.0	0.0	NEG
Soot %	%	ASTM D7844*	>6	0.6	0.5	0.6
Nitration	Abs/cm	ASTM D7624*	>20	16.2	16.4	16.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	26.9	28.3	34.2
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
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. The condition of the oil is acceptable for the time in service (see recommendation).

Sodium	ppm	ASTM D5185(m)		● 210	79	51
Boron	ppm	ASTM D5185(m)	0	3	1	2
Barium	ppm	ASTM D5185(m)	0	0	0	<1
Molybdenum	ppm	ASTM D5185(m)	60	60	45	46
Manganese	ppm	ASTM D5185(m)	0	<1	0	0
Magnesium	ppm	ASTM D5185(m)	1010	794	733	755
Calcium	ppm	ASTM D5185(m)	1070	864	834	849
Phosphorus	ppm	ASTM D5185(m)	1150	817	767	794
Zinc	ppm	ASTM D5185(m)	1270	973	899	951
Sulfur	ppm	ASTM D5185(m)	2060	1965	1956	1883
Oxidation	Abs/.1mm	ASTM D7414*	>25	32.1	36.0	47.2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	▲ 11.3	▲ 10.8	▲ 11.2



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL01106886 **Received** : 26 Apr 2024
Lab Number : 02631503 **Tested** : 29 Apr 2024
Unique Number : 5772656 **Diagnosed** : 29 Apr 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: Glycol, PercentFuel, Visual)

GFL Environmental - 207 - Pickering SW
 1034 TOY AVENUE, PICKERING YARD
 PICKERING, ON
 CA L1W 3P1
 Contact: Ian Patton
 ipatton@gflenv.com
 T: (905)831-6297
 F: (905)426-3577

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.