



Area
GFL216
Machine Id
401224
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- 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		GFL0113893	GFL0099678	GFL0091736
Sample Date		Client Info		31 Mar 2024	21 Dec 2023	14 Aug 2023
Machine Age	kms	Client Info		784325	770686	752598
Oil Age	kms	Client Info		0	0	0
Filter Age	kms	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>120	14	11	20
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	0	<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)	>20	2	2	1
Lead	ppm	ASTM D5185(m)	>40	2	1	1
Copper	ppm	ASTM D5185(m)	>330	8	<1	7
Tin	ppm	ASTM D5185(m)	>15	0	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

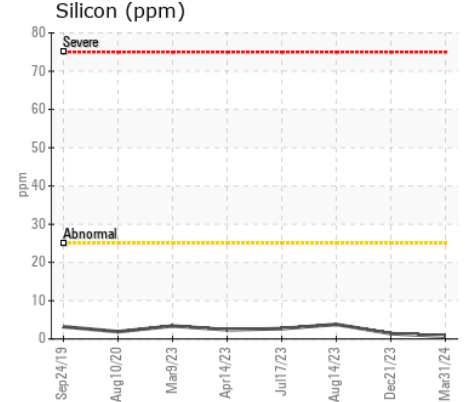
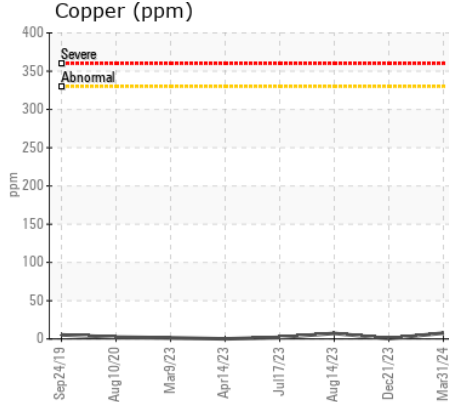
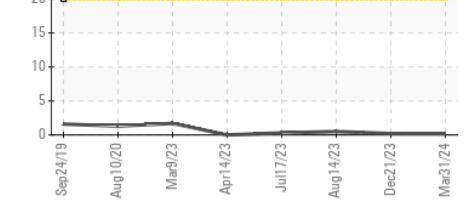
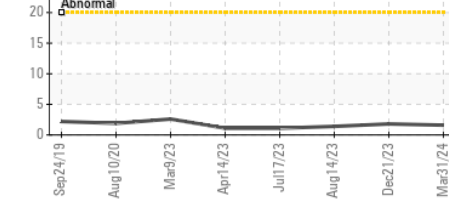
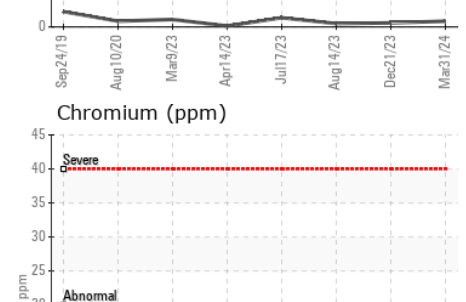
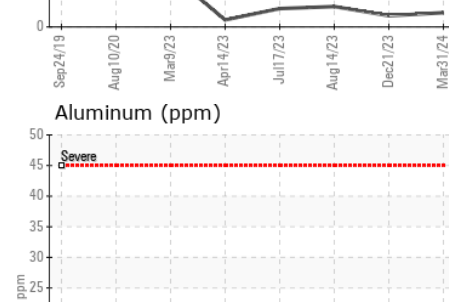
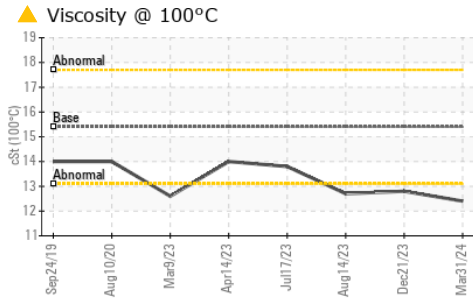
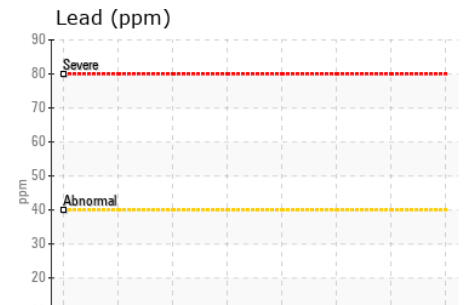
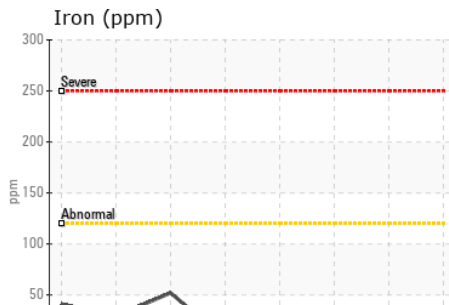
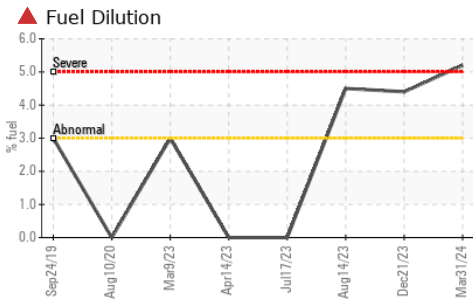
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<1	1	4
Potassium	ppm	ASTM D5185(m)	>20	<1	0	1
Fuel	%	ASTM D7593*	>3.0	▲ 5.2	▲ 4.4	▲ 4.5
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>4	1.1	1.2	1.6
Nitration	Abs/cm	ASTM D7624*	>20	7.8	6.8	7.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.4	19.9	21.4
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)		1	1	3
Boron	ppm	ASTM D5185(m)	0	4	2	5
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	57	57	57
Manganese	ppm	ASTM D5185(m)	0	0	0	<1
Magnesium	ppm	ASTM D5185(m)	1010	935	907	897
Calcium	ppm	ASTM D5185(m)	1070	1010	1018	994
Phosphorus	ppm	ASTM D5185(m)	1150	947	956	982
Zinc	ppm	ASTM D5185(m)	1270	1137	1110	1110
Sulfur	ppm	ASTM D5185(m)	2060	2403	2576	2335
Oxidation	Abs/.1mm	ASTM D7414*	>25	14.6	13.3	14.6
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	▲ 12.4	▲ 12.8	▲ 12.7



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0113893
Lab Number : 02625961
Unique Number : 5759093
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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F: