

Machine Id
400568
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

We advise that you check the fuel injection system. 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		GFL0120317	GFL0037380	GFL0021089
Sample Date		Client Info		23 May 2024	02 Jun 2022	16 Mar 2021
Machine Age	hrs	Client Info		0	512644	424305
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	Changed
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				SEVERE	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>120	10	37	9
Chromium	ppm	ASTM D5185(m)	>20	<1	1	<1
Nickel	ppm	ASTM D5185(m)	>5	3	2	<1
Titanium	ppm	ASTM D5185(m)	>2	<1	0	<1
Silver	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	5	29	4
Lead	ppm	ASTM D5185(m)	>40	0	4	<1
Copper	ppm	ASTM D5185(m)	>330	1	14	3
Tin	ppm	ASTM D5185(m)	>15	0	1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

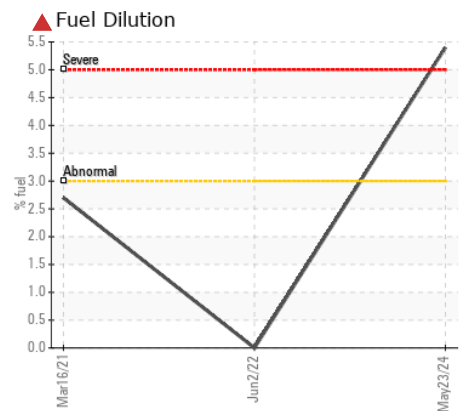
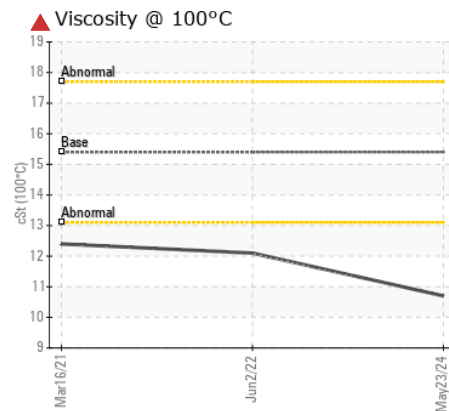
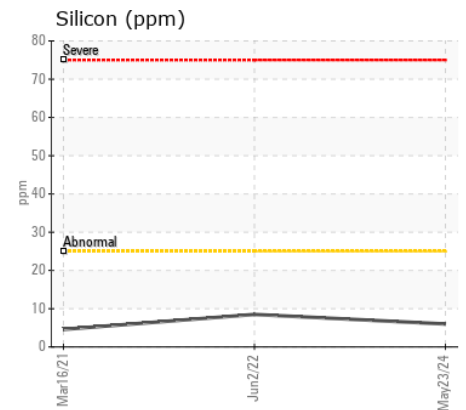
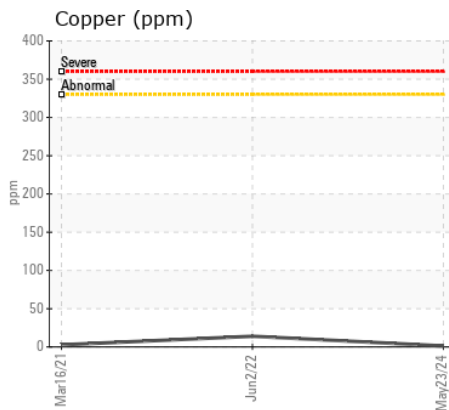
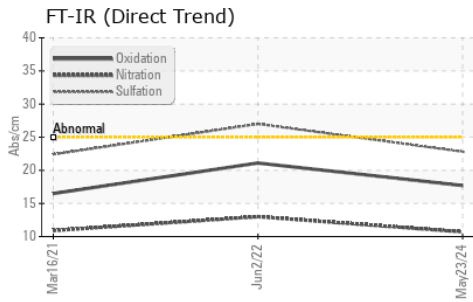
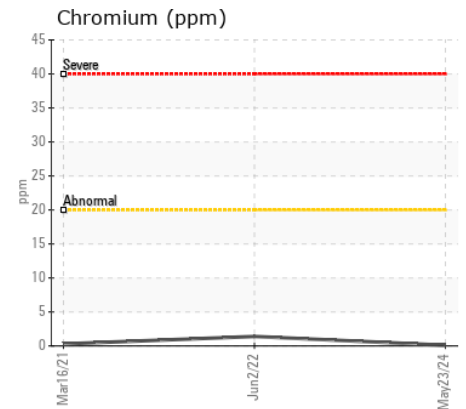
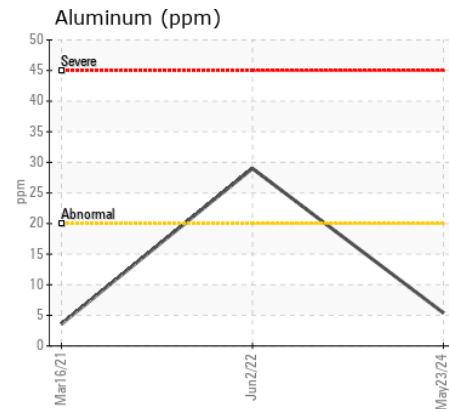
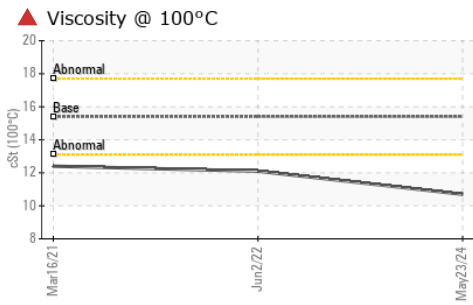
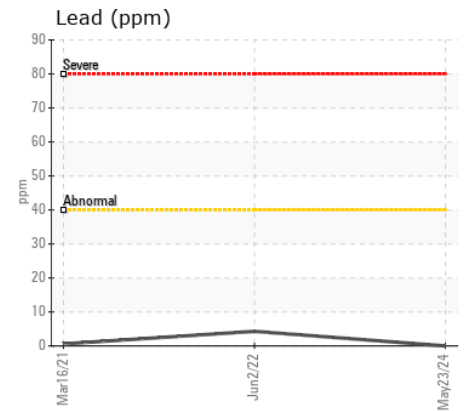
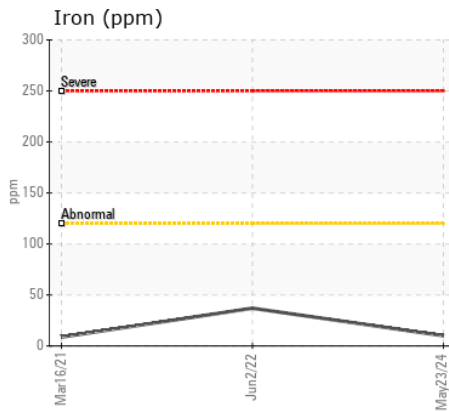
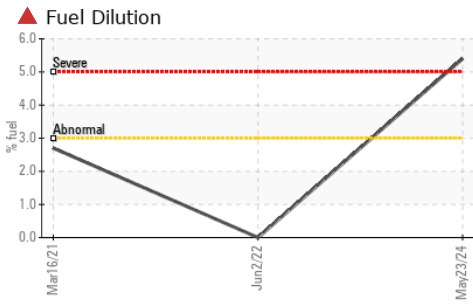
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185(m)	>25	6	8	5
Potassium	ppm	ASTM D5185(m)	>20	<1	59	2
Fuel	%	ASTM D7593*	>3.0	▲ 5.4	<1.0	2.7
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>4	0.2	0.4	0.1
Nitration	Abs/cm	ASTM D7624*	>20	10.7	13.0	10.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	22.8	27.0	22.4
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)		4	6	3
Boron	ppm	ASTM D5185(m)	0	23	2	8
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	60	59	32
Manganese	ppm	ASTM D5185(m)	0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	914	992	481
Calcium	ppm	ASTM D5185(m)	1070	1049	1076	1519
Phosphorus	ppm	ASTM D5185(m)	1150	876	1016	885
Zinc	ppm	ASTM D5185(m)	1270	1061	1223	1169
Sulfur	ppm	ASTM D5185(m)	2060	2457	2314	2831
Oxidation	Abs/.1mm	ASTM D7414*	>25	17.7	21.1	16.5
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	▲ 10.7	12.1	12.4



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0120317
Lab Number : 02637414
Unique Number : 5786576
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 851 - New Glasgow
 108 ACHERON COURT
 STELLARTON, NS
 CA B0K 1S0
 Contact: Lloyd Kenny
 lkenny@gflenv.com
 T: (902)755-5300
 F: (902)752-2301

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.