



Area
[1206289]
Machine Id
201069
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (20 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		GFL0102711	GFL0089026	GFL0084326
Sample Date		Client Info		08 Jan 2024	03 Oct 2023	14 Aug 2023
Machine Age	hrs	Client Info		16585	15976	6998
Oil Age	hrs	Client Info		0	0	264
Filter Age	hrs	Client Info		0	0	264
Oil Changed		Client Info		N/A	Changed	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				SEVERE	SEVERE	MARGINAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>75	46	27	21
Chromium	ppm	ASTM D5185(m)	>5	2	1	<1
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	<1	0
Aluminum	ppm	ASTM D5185(m)	>15	3	2	5
Lead	ppm	ASTM D5185(m)	>25	<1	<1	0
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

CONTAMINATION

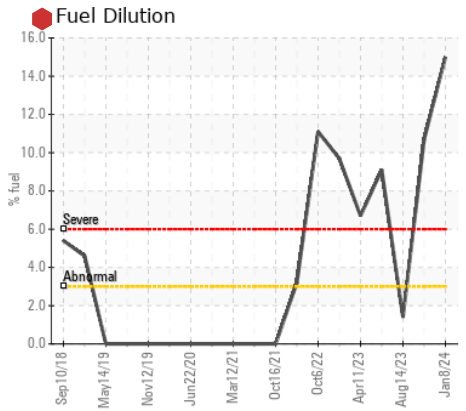
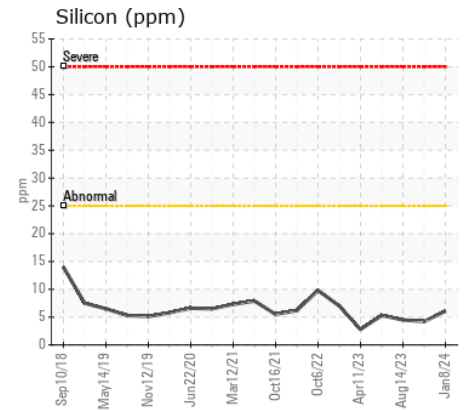
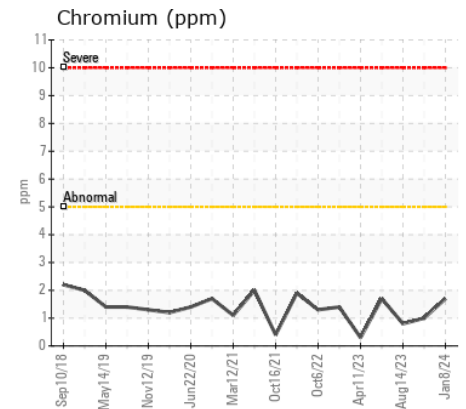
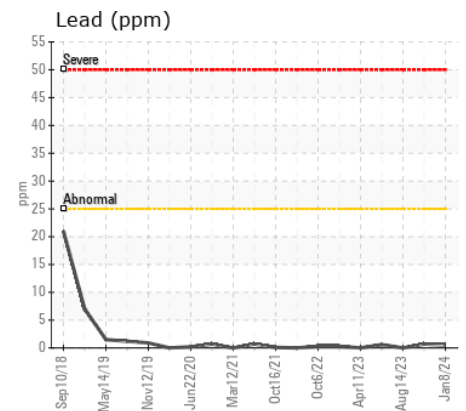
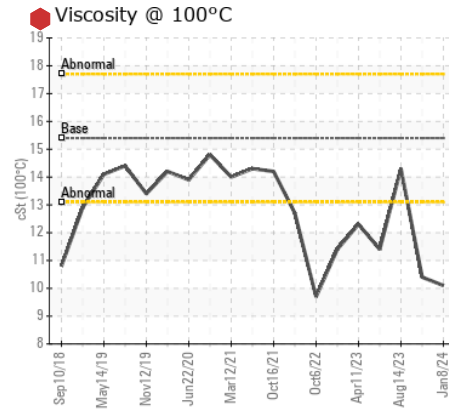
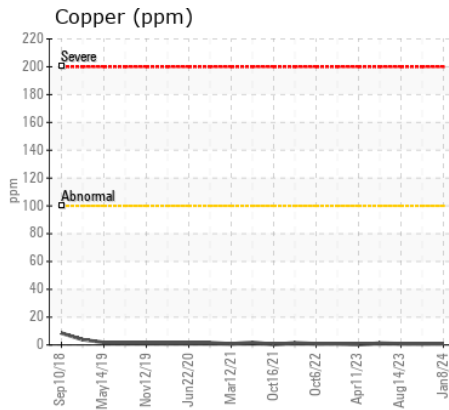
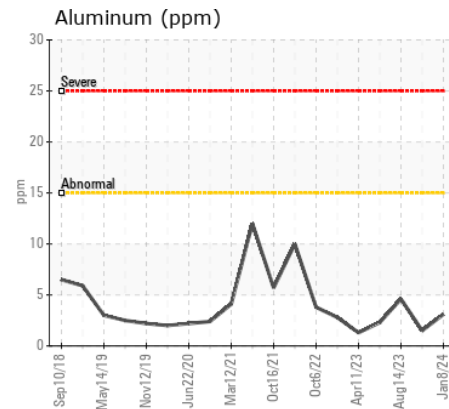
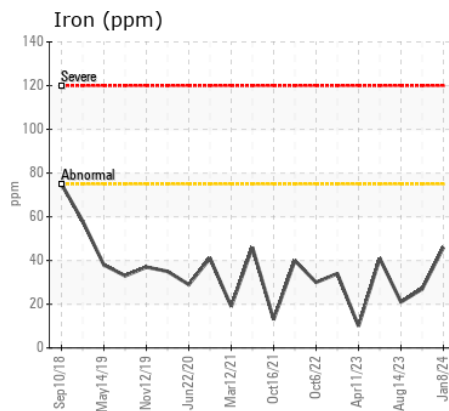
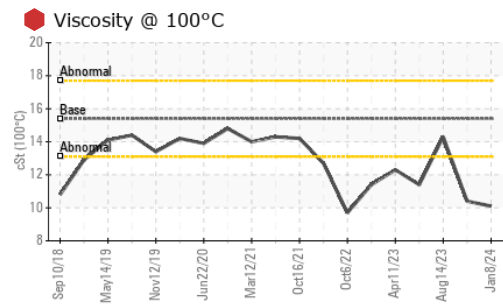
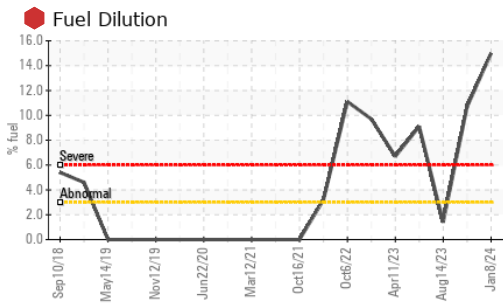
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185(m)	>25	6	4	4
Potassium	ppm	ASTM D5185(m)	>20	4	2	2
Fuel	%	ASTM D7593*	>3.0	15	10.7	1.4
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>6	0.4	0.3	0.6
Nitration	Abs/cm	ASTM D7624*	>20	11.9	11.0	7.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	24.0	25.5	21.0
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)		6	7	2
Boron	ppm	ASTM D5185(m)	0	1	2	2
Barium	ppm	ASTM D5185(m)	0	0	<1	0
Molybdenum	ppm	ASTM D5185(m)	60	47	51	56
Manganese	ppm	ASTM D5185(m)	0	0	0	<1
Magnesium	ppm	ASTM D5185(m)	1010	760	815	944
Calcium	ppm	ASTM D5185(m)	1070	860	886	1007
Phosphorus	ppm	ASTM D5185(m)	1150	810	830	1021
Zinc	ppm	ASTM D5185(m)	1270	964	1002	1151
Sulfur	ppm	ASTM D5185(m)	2060	2039	2087	2457
Oxidation	Abs/.1mm	ASTM D7414*	>25	26.2	29.7	15.3
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	10.1	10.4	14.3



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 207 - Pickering SW**
Sample No. : GFL0102711 **Received** : 10 Jan 2024 **1034 TOY AVENUE, PICKERING YARD**
Lab Number : 02607668 **Diagnosed** : 02 Feb 2024 **PICKERING, ON**
Unique Number : 5708754 **Diagnostician** : Bill Quesnel **CA L1W 3P1**
Test Package : MOB 1 (Additional Tests: PercentFuel) **Contact: Ian Patton**
To discuss this sample report, contact Customer Service at 1-800-268-2131. **ipatton@gflenv.com**
Test denoted () outside scope of accreditation, (m) method modified, (e) tested at external lab.* **T: (905)831-6297**
Validity of results and interpretation are based on the sample and information as supplied. **F: (905)426-3577**