



Machine Id
524002
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill.
Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0113217	GFL0097322	GFL0065897
Sample Date		Client Info		30 Apr 2024	16 Nov 2023	15 Dec 2022
Machine Age	hrs	Client Info		0	0	19001
Oil Age	hrs	Client Info		20309	19972	528
Filter Age	hrs	Client Info		0	0	528
Oil Changed		Client Info		N/A	N/A	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>120	8	10	12
Chromium	ppm	ASTM D5185(m)	>20	0	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	6	2	2
Titanium	ppm	ASTM D5185(m)	>2	<1	0	<1
Silver	ppm	ASTM D5185(m)	>2	0	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	3	3	7
Lead	ppm	ASTM D5185(m)	>40	0	2	1
Copper	ppm	ASTM D5185(m)	>330	2	3	3
Tin	ppm	ASTM D5185(m)	>15	0	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---

CONTAMINATION

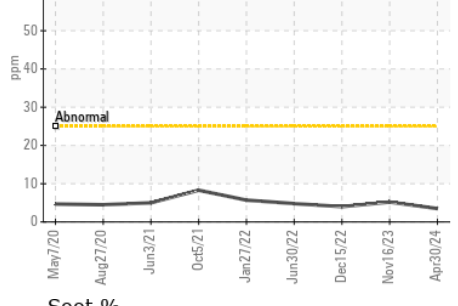
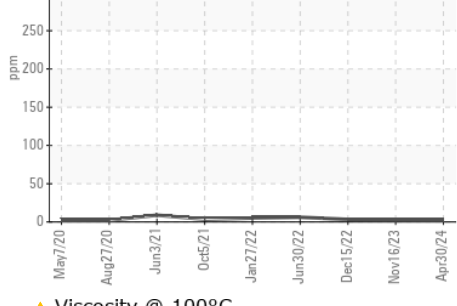
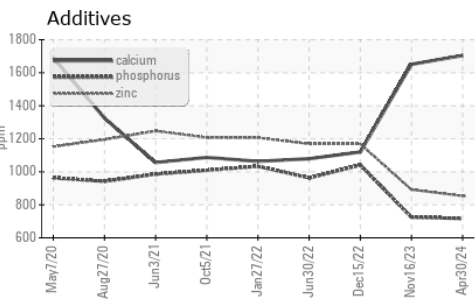
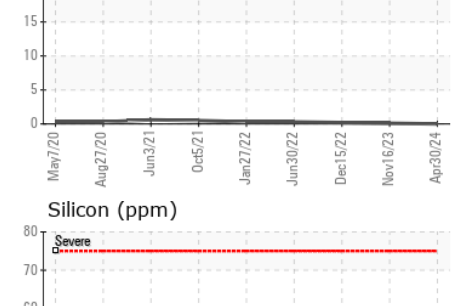
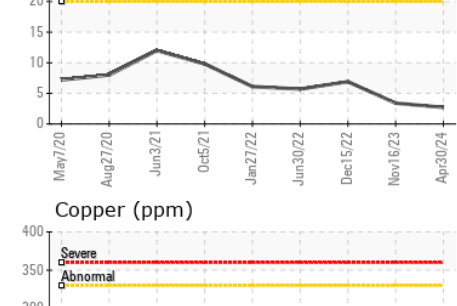
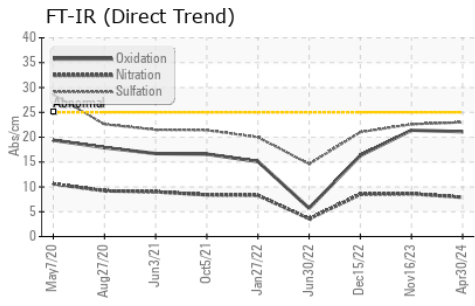
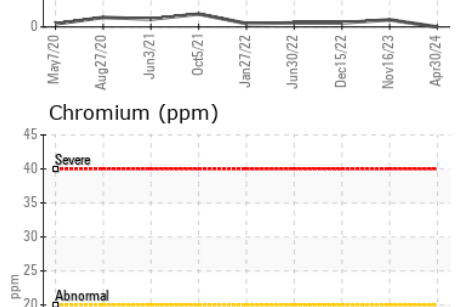
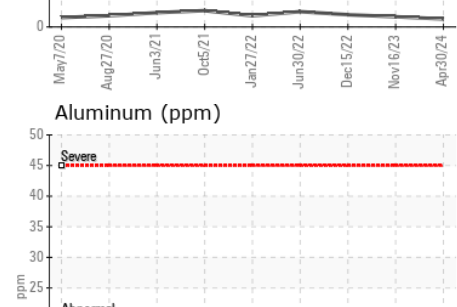
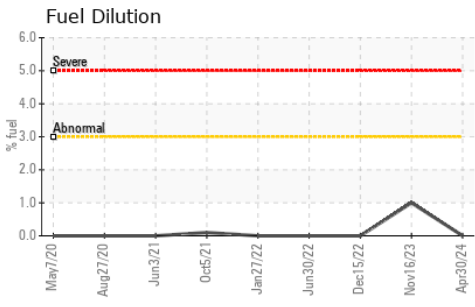
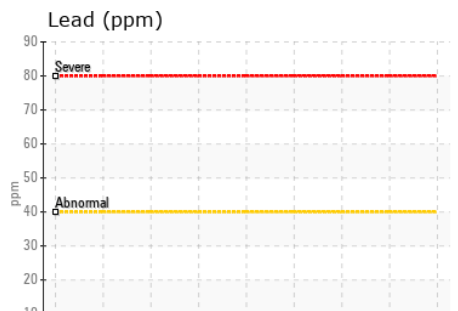
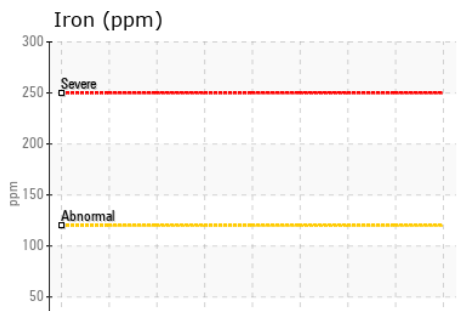
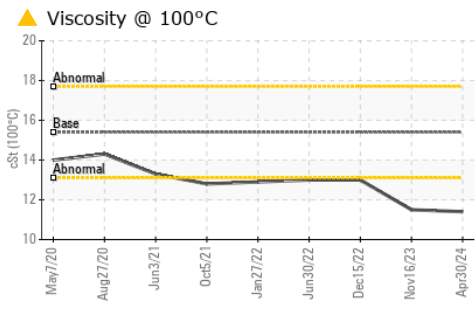
Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	4	5	4
Potassium	ppm	ASTM D5185(m)	>20	1	2	6
Fuel	%	ASTM D7593*	>3.0	0.0	1	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	0.0
Soot %	%	ASTM D7844*	>4	0.1	0.3	0.2
Nitration	Abs/cm	ASTM D7624*	>20	7.9	8.6	8.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	23.0	22.6	21.0
Silt	scalar	Visual*	NONE	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

Viscosity of sample indicates oil is within SAE 30 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		2	4	6
Boron	ppm	ASTM D5185(m)	0	34	18	4
Barium	ppm	ASTM D5185(m)	0	0	<1	0
Molybdenum	ppm	ASTM D5185(m)	60	45	42	59
Manganese	ppm	ASTM D5185(m)	0	<1	0	<1
Magnesium	ppm	ASTM D5185(m)	1010	492	538	930
Calcium	ppm	ASTM D5185(m)	1070	1704	1651	1120
Phosphorus	ppm	ASTM D5185(m)	1150	717	725	1041
Zinc	ppm	ASTM D5185(m)	1270	854	892	1169
Sulfur	ppm	ASTM D5185(m)	2060	2079	1966	2392
Oxidation	Abs/.1mm	ASTM D7414*	>25	21.1	21.4	16.3
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	▲ 11.4	▲ 11.5	13.0



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0113217
Lab Number : 02632512
Unique Number : 5773665
Test Package : MOB 1 (Additional Tests: FUELDILUTION, PercentFuel, Visual)
Received : 01 May 2024
Tested : 03 May 2024
Diagnosed : 03 May 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.

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