



Machine Id
928002
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		GFL0113247	GFL0113254	GFL0102882
Sample Date		Client Info		17 May 2024	27 Feb 2024	23 Nov 2023
Machine Age	hrs	Client Info		3311	0	0
Oil Age	hrs	Client Info		0	10079	16281
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>120	5	8	4
Chromium	ppm	ASTM D5185(m)	>20	0	<1	0
Nickel	ppm	ASTM D5185(m)	>5	0	<1	0
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	0	<1	<1
Copper	ppm	ASTM D5185(m)	>330	<1	<1	<1
Tin	ppm	ASTM D5185(m)	>15	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

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

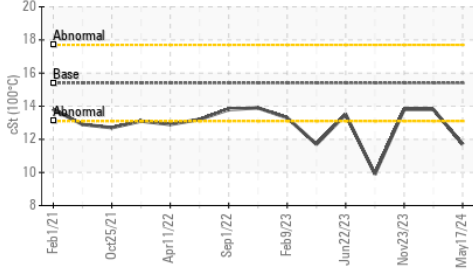
Silicon	ppm	ASTM D5185(m)	>25	3	2	3
Potassium	ppm	ASTM D5185(m)	>20	<1	10	4
Fuel	%	ASTM D7593*	>3.0	0.0	<1.0	1.7
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	0.0	NEG
Soot %	%	ASTM D7844*	>4	0.2	0.4	0.1
Nitration	Abs/cm	ASTM D7624*	>20	8.0	9.1	9.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	22.9	23.8	23.4
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

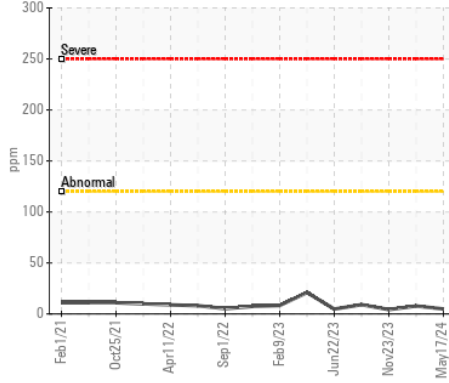
Viscosity of sample indicates oil is within SAE 30 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		2	3	3
Boron	ppm	ASTM D5185(m)	0	35	65	97
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	34	4	12
Manganese	ppm	ASTM D5185(m)	0	<1	0	0
Magnesium	ppm	ASTM D5185(m)	1010	433	57	67
Calcium	ppm	ASTM D5185(m)	1070	1727	2168	2137
Phosphorus	ppm	ASTM D5185(m)	1150	718	872	975
Zinc	ppm	ASTM D5185(m)	1270	875	1102	1154
Sulfur	ppm	ASTM D5185(m)	2060	2040	2690	2843
Oxidation	Abs/.1mm	ASTM D7414*	>25	20.2	19.0	19.6
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	▲ 11.7	13.8	13.8

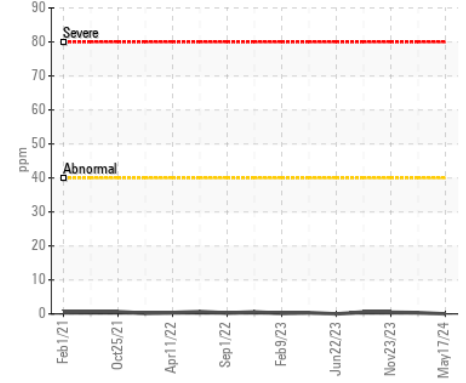
▲ Viscosity @ 100°C



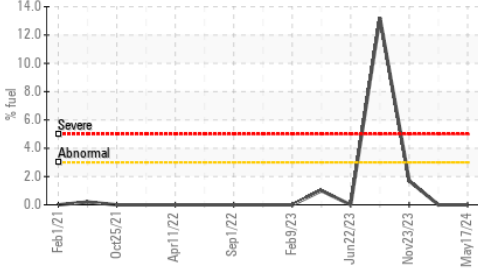
Iron (ppm)



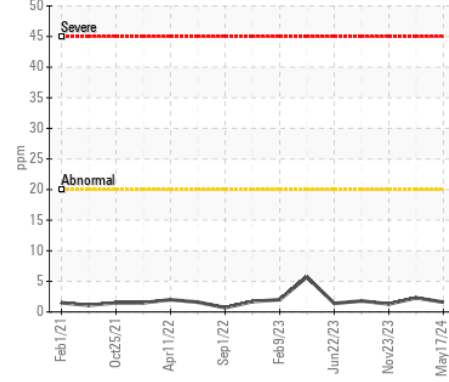
Lead (ppm)



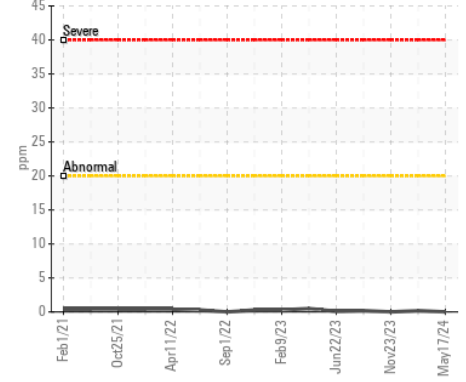
Fuel Dilution



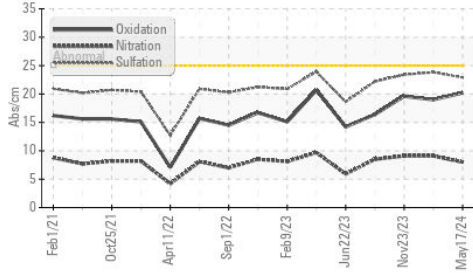
Aluminum (ppm)



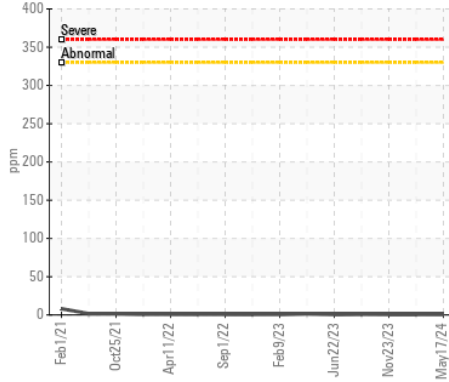
Chromium (ppm)



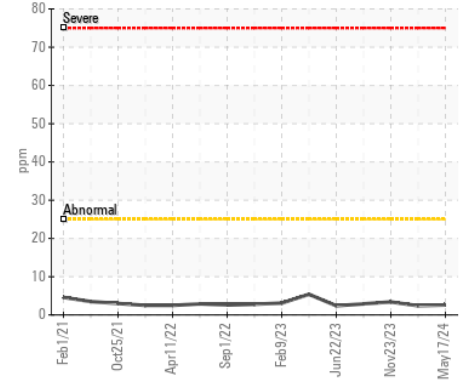
FT-IR (Direct Trend)



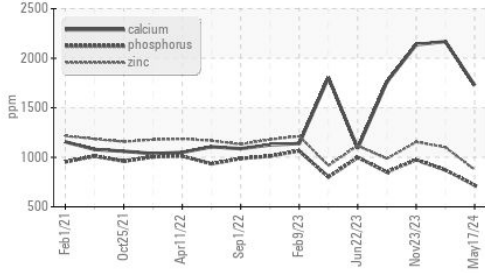
Copper (ppm)



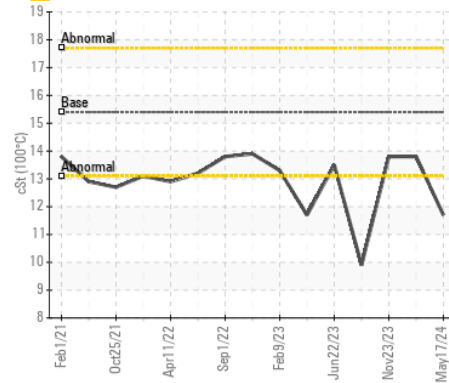
Silicon (ppm)



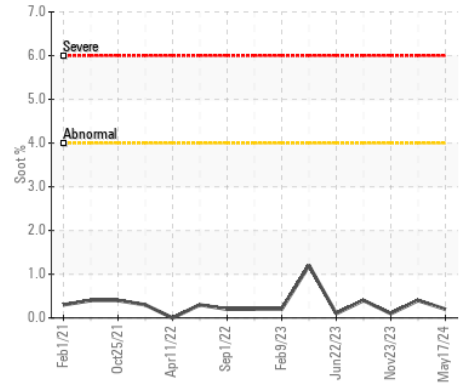
Additives



▲ Viscosity @ 100°C



Soot %



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0113247
Lab Number : 02636591
Unique Number : 5785753
Test Package : MOB 1 (Additional Tests: FUELDILUTION, PercentFuel)

GFL Environmental - 246 - Windsor
 2700 Deziel Dr
 Windsor, ON
 CA N8W 5H8
 Contact: Dave Varga
 dvarga@gflenv.com
 T: (519)944-8009
 F:

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.