



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL



Machine Id
728004
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. 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		GFL0113243	GFL0097332	GFL0090864
Sample Date		Client Info		16 Apr 2024	04 Jan 2024	25 Sep 2023
Machine Age	hrs	Client Info		0	0	12038
Oil Age	hrs	Client Info		13277	12706	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>120	8	6	17
Chromium	ppm	ASTM D5185(m)	>20	0	0	<1
Nickel	ppm	ASTM D5185(m)	>5	1	1	1
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	3	2	3
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	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

Fuel content negligible. There is no indication of any contamination in the oil.

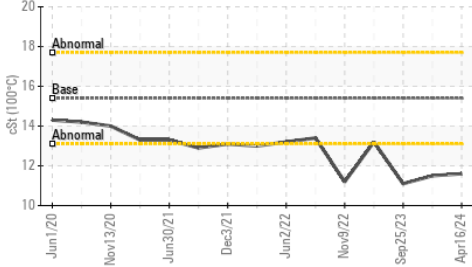
Silicon	ppm	ASTM D5185(m)	>25	3	4	5
Potassium	ppm	ASTM D5185(m)	>20	2	1	<1
Fuel	%	ASTM D7593*	>3.0	0.8	0.8	1.8
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>4	0.7	0.2	0.2
Nitration	Abs/cm	ASTM D7624*	>20	7.9	8.6	9.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	21.8	22.2	21.5
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

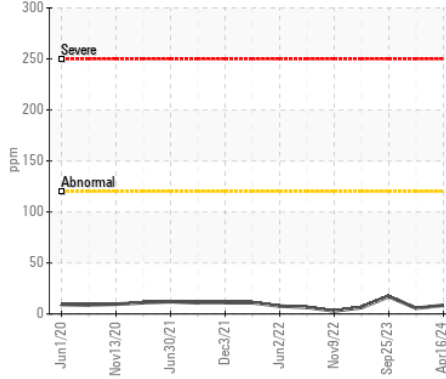
Viscosity of sample indicates oil is within SAE 30 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		9	7	2
Boron	ppm	ASTM D5185(m)	0	41	31	15
Barium	ppm	ASTM D5185(m)	0	0	0	<1
Molybdenum	ppm	ASTM D5185(m)	60	35	43	41
Manganese	ppm	ASTM D5185(m)	0	<1	0	0
Magnesium	ppm	ASTM D5185(m)	1010	445	533	495
Calcium	ppm	ASTM D5185(m)	1070	1674	1656	1717
Phosphorus	ppm	ASTM D5185(m)	1150	694	728	739
Zinc	ppm	ASTM D5185(m)	1270	844	881	871
Sulfur	ppm	ASTM D5185(m)	2060	2019	2134	2117
Oxidation	Abs/.1mm	ASTM D7414*	>25	20.3	20.6	21.5
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	▲ 11.6	▲ 11.5	▲ 11.1

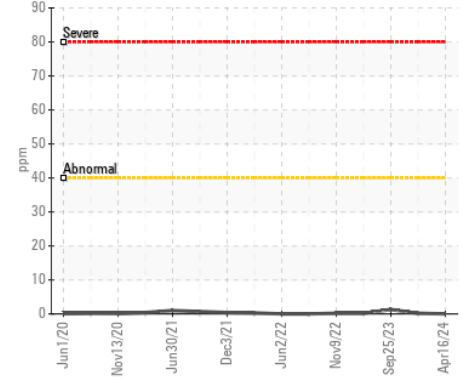
▲ Viscosity @ 100°C



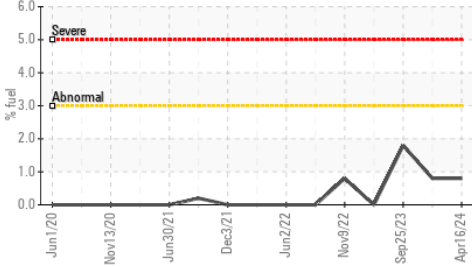
Iron (ppm)



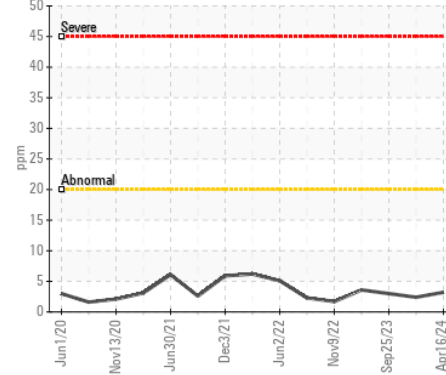
Lead (ppm)



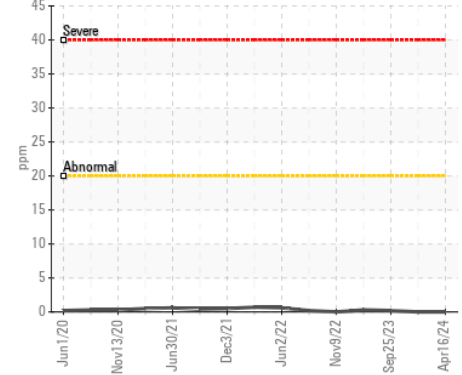
Fuel Dilution



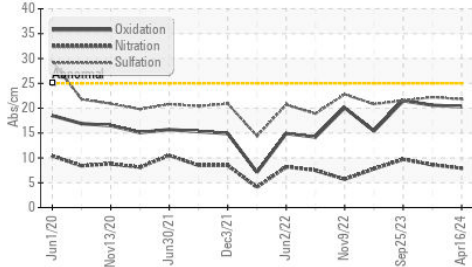
Aluminum (ppm)



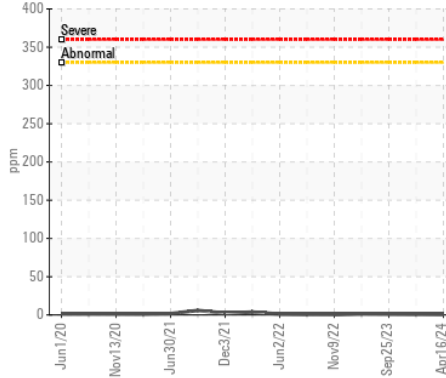
Chromium (ppm)



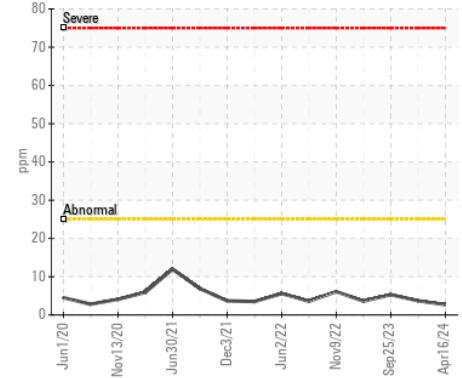
FT-IR (Direct Trend)



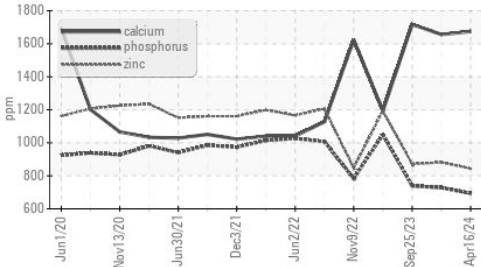
Copper (ppm)



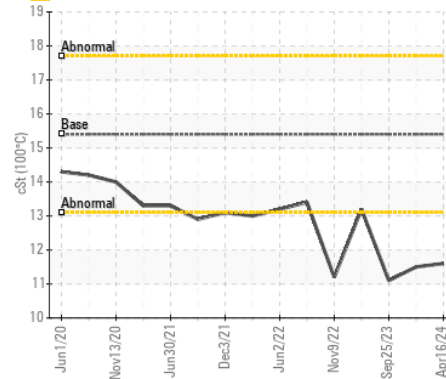
Silicon (ppm)



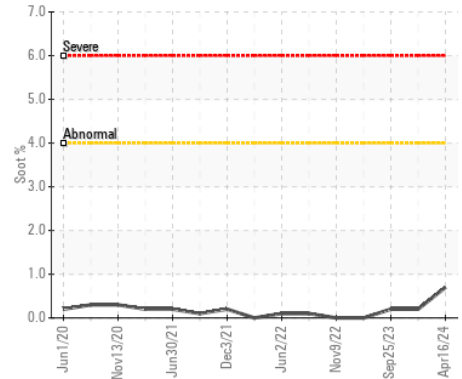
Additives



▲ Viscosity @ 100°C



Soot %



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0113243
Lab Number : 02629852
Unique Number : 5762984
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.