



WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	ABNORMAL



Machine Id
428008
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0113229	GFL0097313	GFL0090862
Sample Date		Client Info		15 Apr 2024	30 Nov 2023	05 Sep 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		11794	11219	10808
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	MARGINAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>80	12	5	9
Chromium	ppm	ASTM D5185(m)	>5	<1	0	<1
Nickel	ppm	ASTM D5185(m)	>2	0	0	0
Titanium	ppm	ASTM D5185(m)		<1	0	<1
Silver	ppm	ASTM D5185(m)	>3	0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>30	2	1	2
Lead	ppm	ASTM D5185(m)	>30	0	<1	3
Copper	ppm	ASTM D5185(m)	>150	<1	<1	3
Tin	ppm	ASTM D5185(m)	>5	0	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

Light fuel dilution occurring.

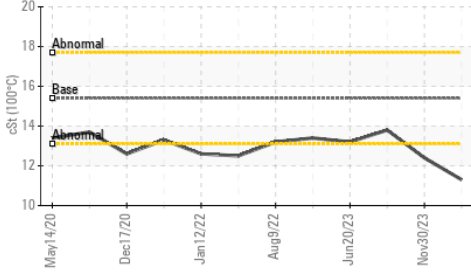
Silicon	ppm	ASTM D5185(m)	>20	3	2	4
Potassium	ppm	ASTM D5185(m)	>20	2	4	2
Fuel	%	ASTM D7593*	>5	▲ 3.6	▲ 2.7	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	0.4	0.2	0.2
Nitration	Abs/cm	ASTM D7624*	>20	11.4	8.5	8.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	23.3	21.5	21.6
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

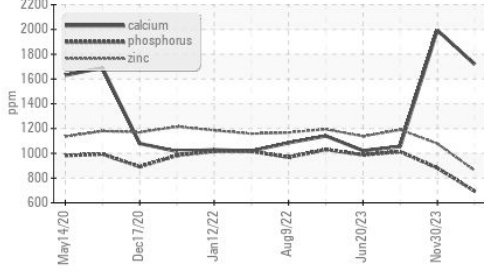
Fuel is present in the oil and is lowering the viscosity. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		1	2	3
Boron	ppm	ASTM D5185(m)	0	● 42	116	3
Barium	ppm	ASTM D5185(m)	0	0	<1	0
Molybdenum	ppm	ASTM D5185(m)	60	36	3	59
Manganese	ppm	ASTM D5185(m)	0	<1	0	<1
Magnesium	ppm	ASTM D5185(m)	1010	● 375	23	964
Calcium	ppm	ASTM D5185(m)	1070	● 1719	1994	1055
Phosphorus	ppm	ASTM D5185(m)	1150	● 694	881	1013
Zinc	ppm	ASTM D5185(m)	1270	● 861	1078	1190
Sulfur	ppm	ASTM D5185(m)	2060	2124	2738	2372
Oxidation	Abs/.1mm	ASTM D7414*	>25	23.5	17.3	16.2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	▲ 11.3	12.4	13.8

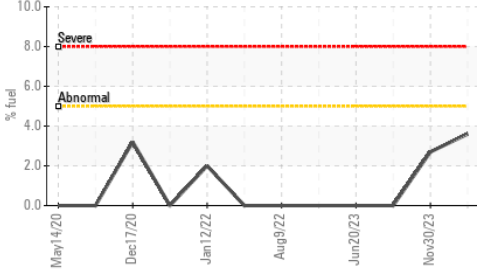
▲ Viscosity @ 100°C



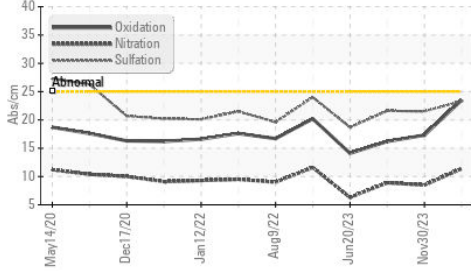
● Additives



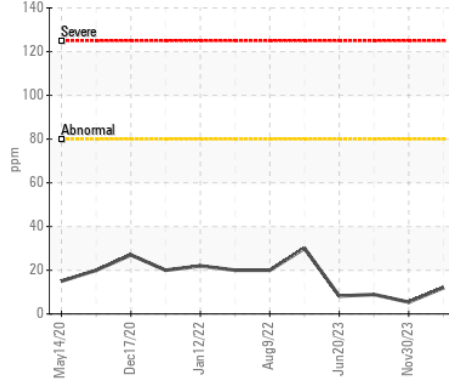
▲ Fuel Dilution



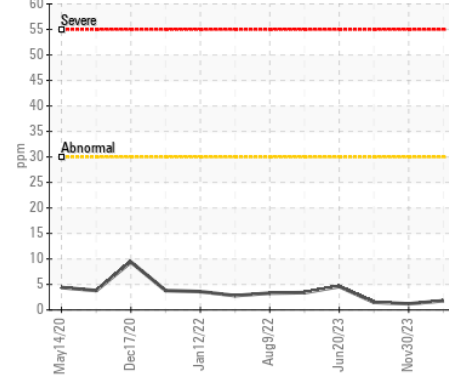
FT-IR (Direct Trend)



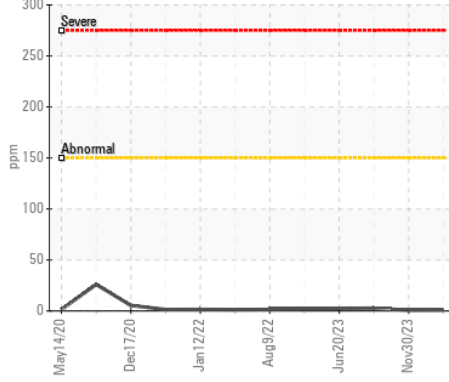
Iron (ppm)



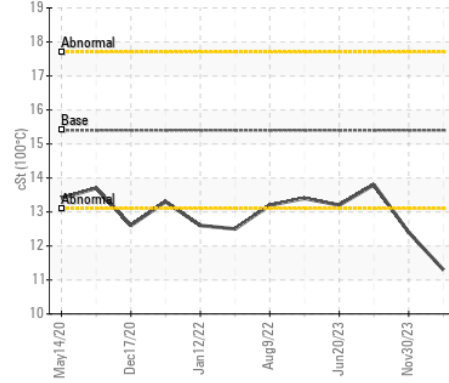
Aluminum (ppm)



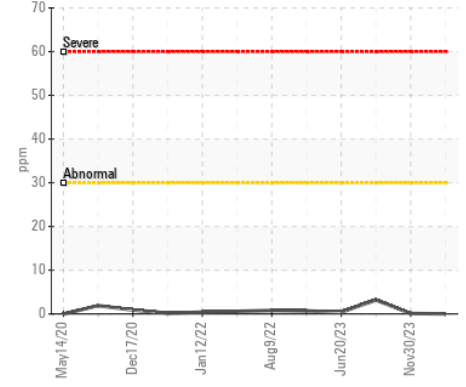
Copper (ppm)



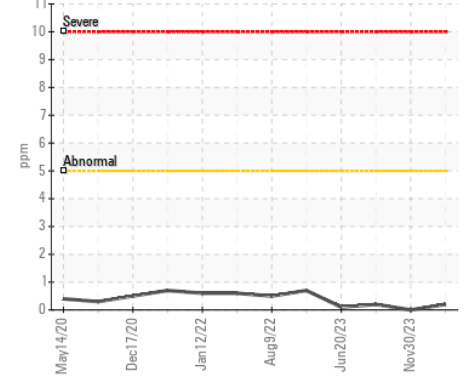
▲ Viscosity @ 100°C



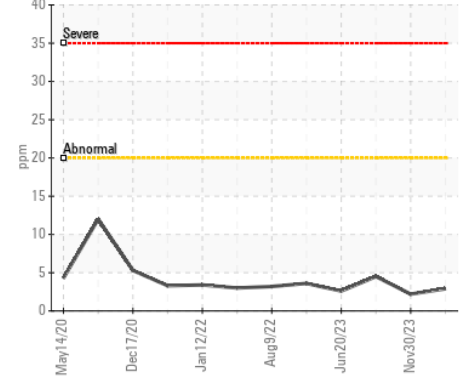
Lead (ppm)



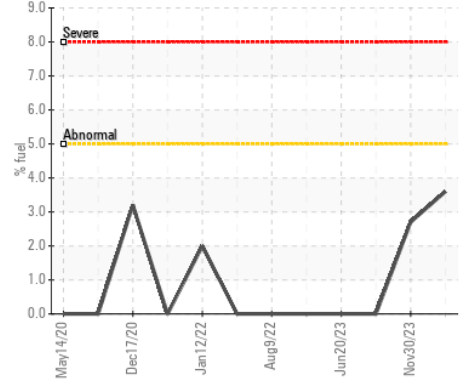
Chromium (ppm)



Silicon (ppm)



▲ Fuel Dilution



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0113229 **Received** : 16 Apr 2024
Lab Number : 02629126 **Tested** : 17 Apr 2024
Unique Number : 5762258 **Diagnosed** : 17 Apr 2024 - Wes Davis
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.