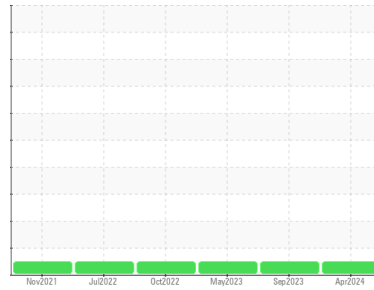




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
731069
 Component
Natural Gas Engine
 Fluid
PETRO CANADA DURON GEO LD 15W40 (--- LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0117148	GFL0085900	GFL0081589
Sample Date	Client Info		23 Apr 2024	28 Sep 2023	25 May 2023
Machine Age	hrs	Client Info	5647	4533	3788
Oil Age	hrs	Client Info	1200	1200	1200
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.1	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>50	11	9	11
Chromium	ppm	ASTM D5185(m)	>4	1	<1	<1
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		<1	0	<1
Silver	ppm	ASTM D5185(m)	>3	0	<1	0
Aluminum	ppm	ASTM D5185(m)	>9	2	1	2
Lead	ppm	ASTM D5185(m)	>30	1	2	<1
Copper	ppm	ASTM D5185(m)	>35	2	2	2
Tin	ppm	ASTM D5185(m)	>4	0	<1	<1
Antimony	ppm	ASTM D5185(m)		0	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)	50	9	9	9
Barium	ppm	ASTM D5185(m)	5	0	<1	0
Molybdenum	ppm	ASTM D5185(m)	50	57	64	58
Manganese	ppm	ASTM D5185(m)	0	<1	0	<1
Magnesium	ppm	ASTM D5185(m)	560	614	541	599
Calcium	ppm	ASTM D5185(m)	1510	1679	1684	1759
Phosphorus	ppm	ASTM D5185(m)	780	710	695	760
Zinc	ppm	ASTM D5185(m)	870	985	953	981
Sulfur	ppm	ASTM D5185(m)	2040	2067	2092	2138
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>+100	2	4	11
Sodium	ppm	ASTM D5185(m)		7	7	8
Potassium	ppm	ASTM D5185(m)	>20	<1	0	<1

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*		0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	11.7	10.7	11.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	24.2	21.9	24.2

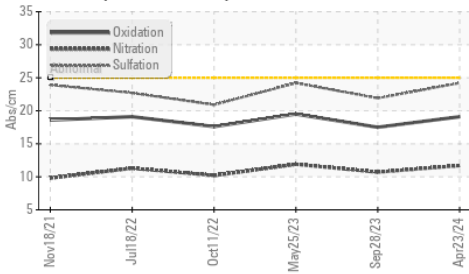
FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414*	>25	19.1	17.5	19.5

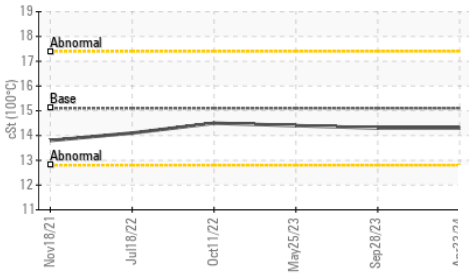


OIL ANALYSIS REPORT

FT-IR (Direct Trend)



Viscosity @ 100°C

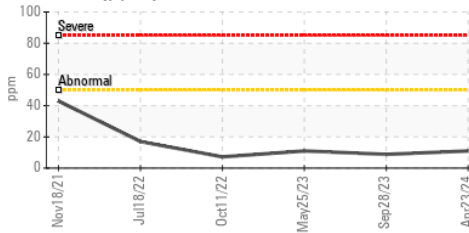


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	---	---
Precipitate	scalar	Visual*	NONE	---	---
Silt	scalar	Visual*	NONE	---	---
Debris	scalar	Visual*	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	---	---
Appearance	scalar	Visual*	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

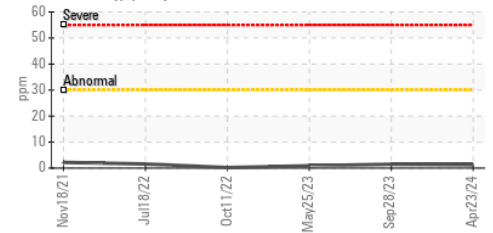
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.1	14.3	14.4

GRAPHS

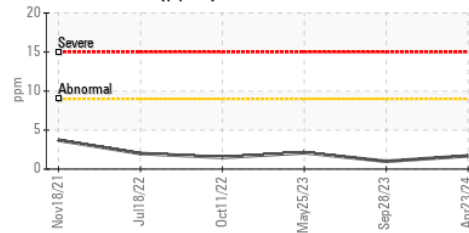
Iron (ppm)



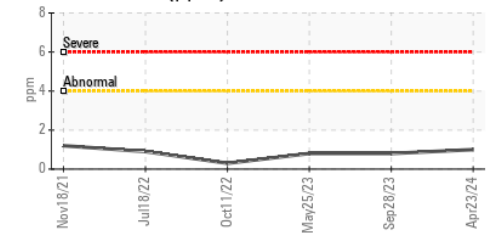
Lead (ppm)



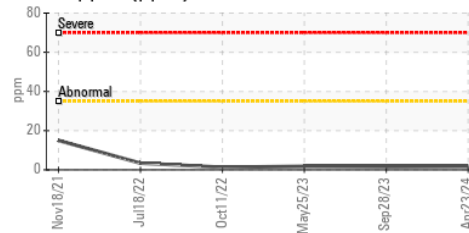
Aluminum (ppm)



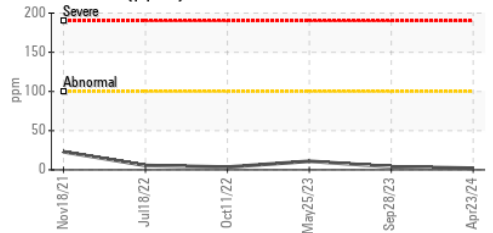
Chromium (ppm)



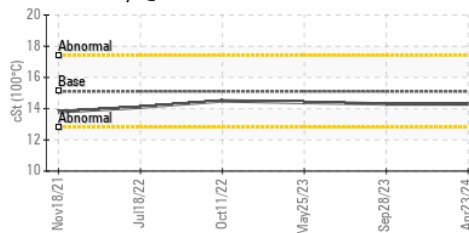
Copper (ppm)



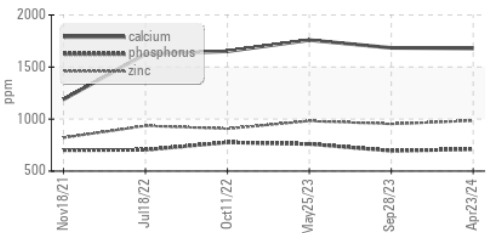
Silicon (ppm)



Viscosity @ 100°C



Additives



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0117148
Lab Number : 02631500
Unique Number : 5772653
Test Package : MOB 1 (Additional Tests: Visual)

GFL Environmental - 209 - Hamilton
 560 Seaman Street
 Stoney Creek, ON
 CA L8E 3X7
 Contact: Fred Carleton
 fred.carleton@gflenv.com
 T: (289)925-6693
 F: (905)664-9008

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.