



Machine Id
9259
Component
Natural Gas Engine
Fluid
PETRO CANADA DURON GEO LD 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0119028	GFL0101683	GFL0090633
Sample Date		Client Info		20 Jun 2024	27 Dec 2023	09 Aug 2023
Machine Age	hrs	Client Info		20075	19093	18087
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>50	21	28	30
Chromium	ppm	ASTM D5185(m)	>5	1	3	2
Nickel	ppm	ASTM D5185(m)	>4	<1	2	1
Titanium	ppm	ASTM D5185(m)	>5	0	0	<1
Silver	ppm	ASTM D5185(m)	>3	<1	0	0
Aluminum	ppm	ASTM D5185(m)	>25	3	11	4
Lead	ppm	ASTM D5185(m)	>40	0	1	<1
Copper	ppm	ASTM D5185(m)	>150	1	2	4
Tin	ppm	ASTM D5185(m)	>4	<1	<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

There is no indication of any contamination in the oil.

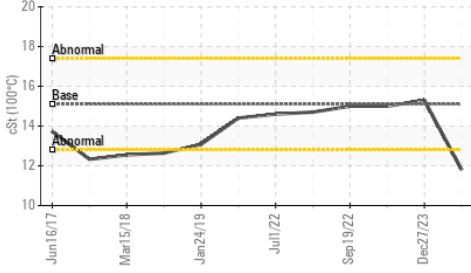
Silicon	ppm	ASTM D5185(m)	>25	12	6	17
Potassium	ppm	ASTM D5185(m)	>20	2	2	2
Water		WC Method	>0.1	NEG	NEG	NEG
Soot %	%	ASTM D7844*		0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	9.0	12.9	10.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	19.6	28.3	22.6
Silt	scalar	Visual*	NONE	NONE	NONE	---
Debris	scalar	Visual*	NONE	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*	>0.1	NEG	NEG	NEG

FLUID CONDITION

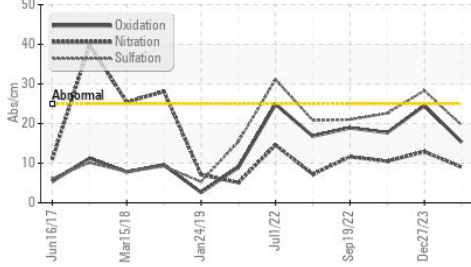
Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		5	10	4
Boron	ppm	ASTM D5185(m)	50	4	5	7
Barium	ppm	ASTM D5185(m)	5	1	0	2
Molybdenum	ppm	ASTM D5185(m)	50	62	62	54
Manganese	ppm	ASTM D5185(m)	0	<1	1	5
Magnesium	ppm	ASTM D5185(m)	560	947	667	523
Calcium	ppm	ASTM D5185(m)	1510	1162	1864	1605
Phosphorus	ppm	ASTM D5185(m)	780	956	853	678
Zinc	ppm	ASTM D5185(m)	870	1175	1066	898
Sulfur	ppm	ASTM D5185(m)	2040	2364	2277	1957
Oxidation	Abs/.1mm	ASTM D7414*	>25	15.3	24.5	17.7
Visc @ 100°C	cSt	ASTM D7279(m)	15.1	▲ 11.8	15.3	15.0

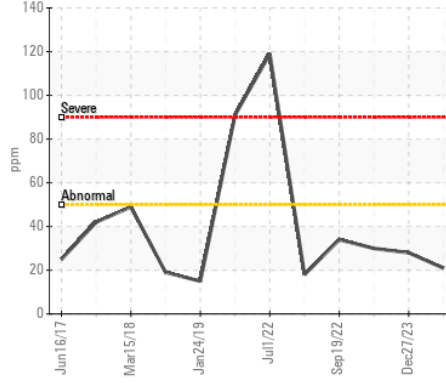
▲ Viscosity @ 100°C



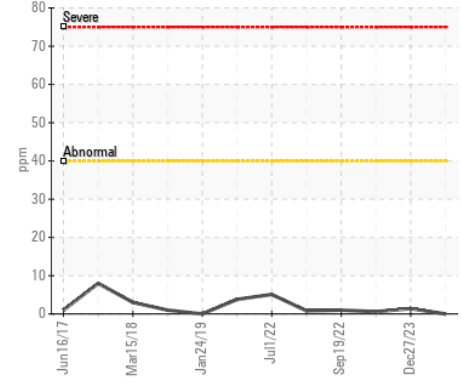
FT-IR (Direct Trend)



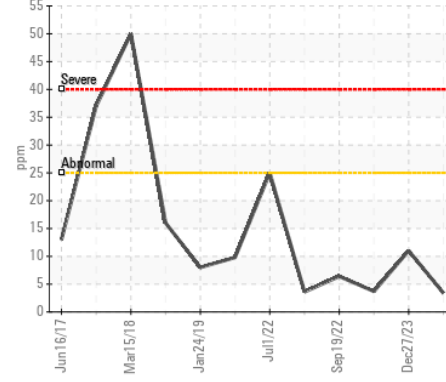
Iron (ppm)



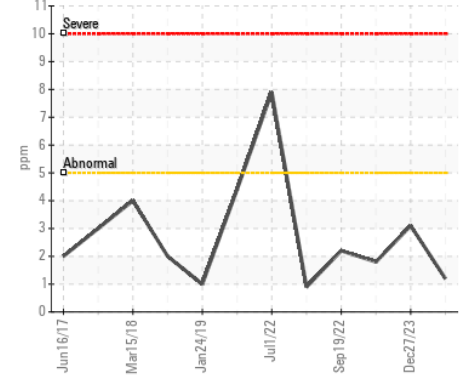
Lead (ppm)



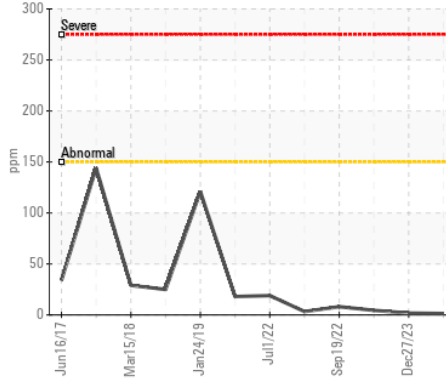
Aluminum (ppm)



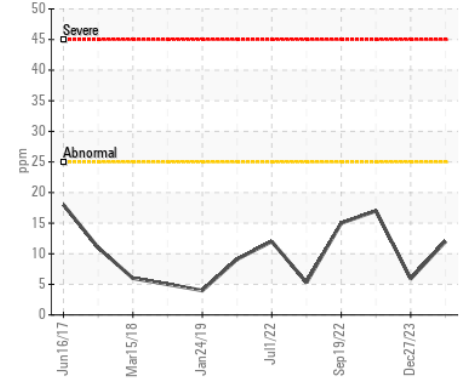
Chromium (ppm)



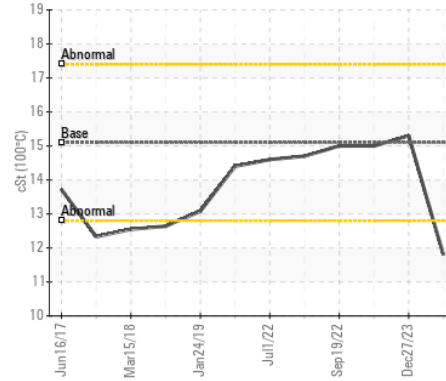
Copper (ppm)



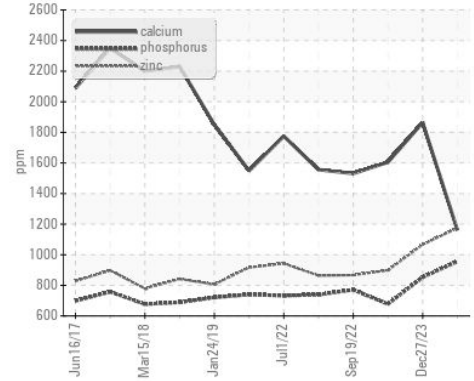
Silicon (ppm)



▲ Viscosity @ 100°C



Additives



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0119028
Lab Number : 02643981
Unique Number : 5801520
Test Package : MOB 1 (Additional Tests: Visual)

GFL Environmental - 554 - Edmonton SW
 8409 -15th Street NW
 Edmonton, AB
 CA T6P 0B8
 Contact: Tim Greig
 tgreig@gflenv.com
 T: (780)231-0521
 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.