



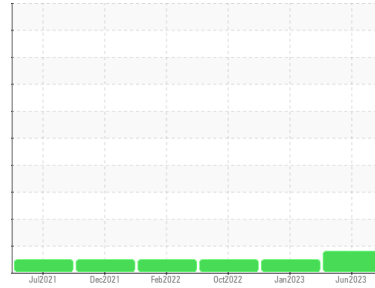
OIL ANALYSIS REPORT

Sample Rating Trend

WEAR



Machine Id
801132
 Component
Natural Gas Engine
 Fluid
PETRO CANADA DURON GEO LD 15W40 (--- GAL)



DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

Nickel ppm levels are marginal. All other 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		GFL0063668	GFL0057450	GFL0057440
Sample Date	Client Info		13 Jun 2023	09 Jan 2023	27 Oct 2022
Machine Age	hrs	Client Info	5684	4602	15366
Oil Age	hrs	Client Info	600	600	600
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			MARGINAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Glycol	WC Method		---	0.0	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >50	36	9	7
Chromium	ppm	ASTM D5185(m) >4	2	<1	<1
Nickel	ppm	ASTM D5185(m) >2	▲ 2	<1	<1
Titanium	ppm	ASTM D5185(m)	<1	<1	0
Silver	ppm	ASTM D5185(m) >3	<1	0	0
Aluminum	ppm	ASTM D5185(m) >9	2	2	1
Lead	ppm	ASTM D5185(m) >30	4	<1	2
Copper	ppm	ASTM D5185(m) >35	38	13	67
Tin	ppm	ASTM D5185(m) >4	<1	<1	0
Antimony	ppm	ASTM D5185(m)	0	0	0
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	5	8	7
Barium	ppm	ASTM D5185(m) 5	0	0	0
Molybdenum	ppm	ASTM D5185(m) 50	68	56	48
Manganese	ppm	ASTM D5185(m) 0	1	<1	<1
Magnesium	ppm	ASTM D5185(m) 560	633	531	503
Calcium	ppm	ASTM D5185(m) 1510	1815	1665	1521
Phosphorus	ppm	ASTM D5185(m) 780	787	748	655
Zinc	ppm	ASTM D5185(m) 870	966	919	844
Sulfur	ppm	ASTM D5185(m) 2040	2370	2044	1999
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >+100	5	6	3
Sodium	ppm	ASTM D5185(m)	11	39	2
Potassium	ppm	ASTM D5185(m) >20	1	49	1

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	0	0	0
Nitration	Abs/cm	ASTM D7624* >20	12.3	9.0	11.1
Sulfation	Abs.1mm	ASTM D7415* >30	31.3	20.3	22.1

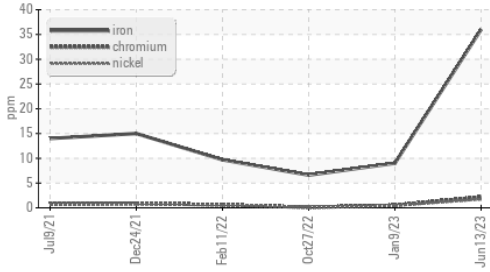
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs.1mm	ASTM D7414* >25	20.7	14.6	18.7

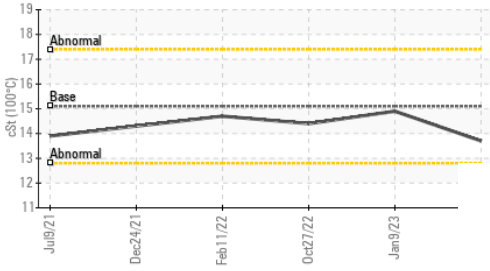


OIL ANALYSIS REPORT

▲ Ferrous Alloys



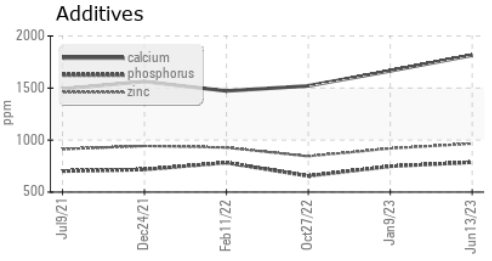
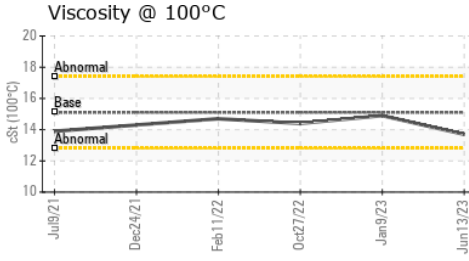
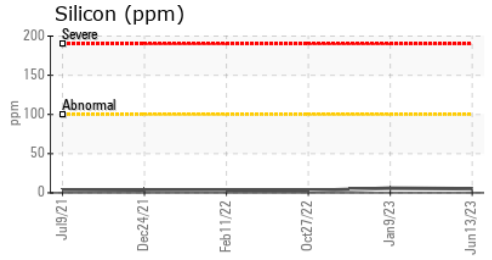
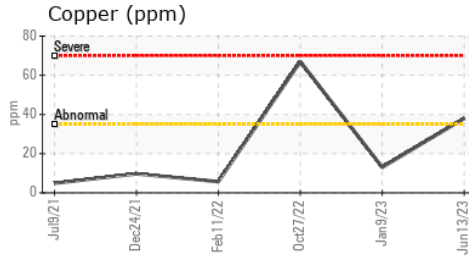
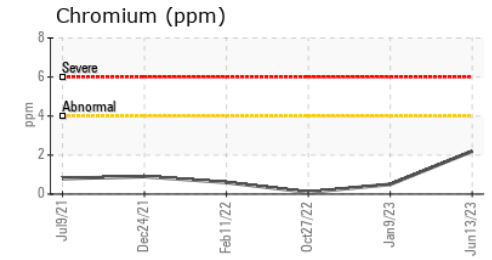
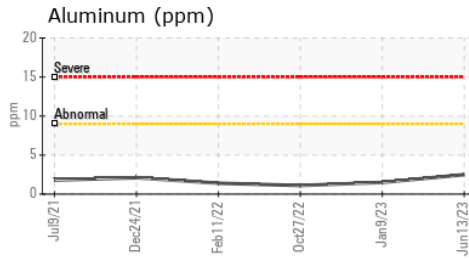
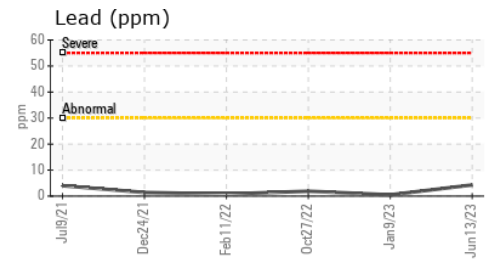
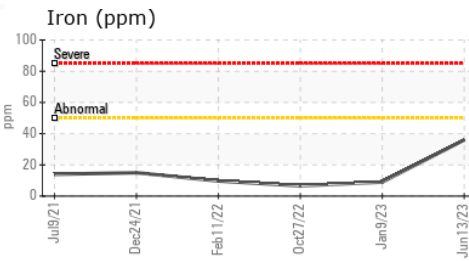
Viscosity @ 100°C



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	13.7	14.9

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 574 - Vancouver Fleet
Sample No. : GFL0063668 **Received** : 14 Jul 2023
Lab Number : 02570090 **Diagnosed** : 14 Jul 2023
Unique Number : 5607136 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: Visual)

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.

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