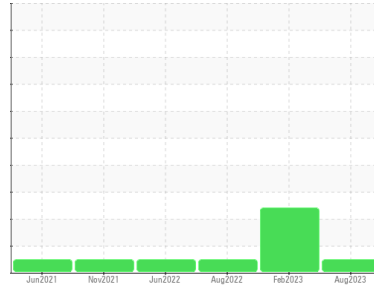




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
801129
 Component
Natural Gas Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. 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

Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0084060	GFL0057520	GFL0039242
Sample Date	Client Info		02 Aug 2023	17 Feb 2023	30 Aug 2022
Machine Age	hrs	Client Info	17469	200396	15287
Oil Age	hrs	Client Info	600	16374	1200
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	ABNORMAL	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	19	26	7
Chromium	ppm	ASTM D5185(m) >4	2	1	<1
Nickel	ppm	ASTM D5185(m) >2	<1	▲ 2	<1
Titanium	ppm	ASTM D5185(m)	<1	<1	0
Silver	ppm	ASTM D5185(m) >3	0	0	0
Aluminum	ppm	ASTM D5185(m) >9	3	3	1
Lead	ppm	ASTM D5185(m) >30	2	8	2
Copper	ppm	ASTM D5185(m) >35	13	33	35
Tin	ppm	ASTM D5185(m) >4	<1	<1	<1
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) 0	10	11	8
Barium	ppm	ASTM D5185(m) 0	0	0	0
Molybdenum	ppm	ASTM D5185(m) 60	60	66	47
Manganese	ppm	ASTM D5185(m) 0	<1	1	<1
Magnesium	ppm	ASTM D5185(m) 1010	621	671	488
Calcium	ppm	ASTM D5185(m) 1070	1750	1931	1472
Phosphorus	ppm	ASTM D5185(m) 1150	764	954	627
Zinc	ppm	ASTM D5185(m) 1270	1010	1073	824
Sulfur	ppm	ASTM D5185(m) 2060	2065	2331	1899
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >+100	5	11	3
Sodium	ppm	ASTM D5185(m)	9	12	8
Potassium	ppm	ASTM D5185(m) >20	<1	1	<1

INFRA-RED

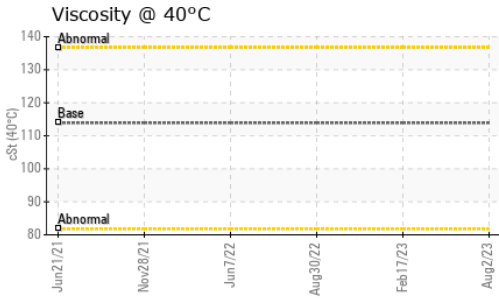
	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	0	0	0
Nitration	Abs/cm	ASTM D7624*	11.9	12.8	10.8
Sulfation	Abs/.1mm	ASTM D7415*	26.7	24.4	22.5

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	18.6	17.7	18.4



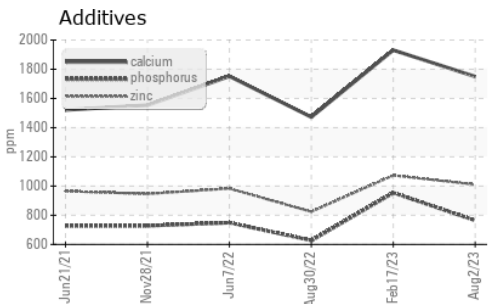
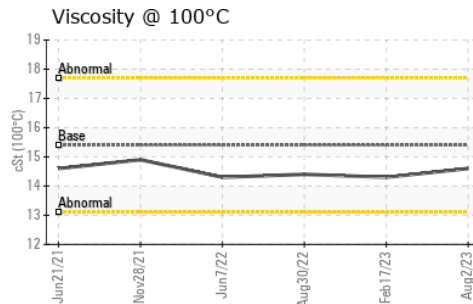
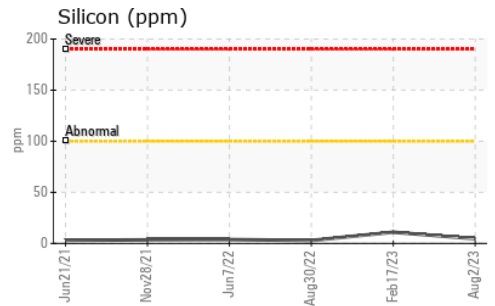
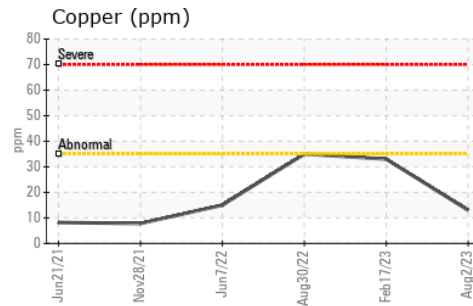
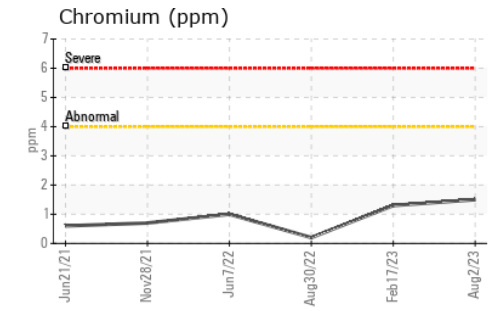
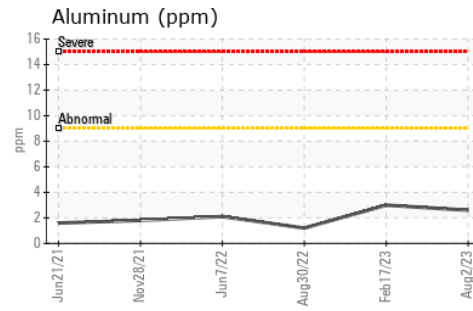
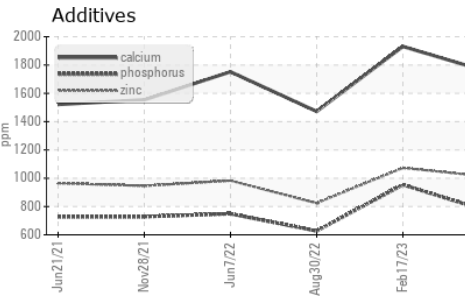
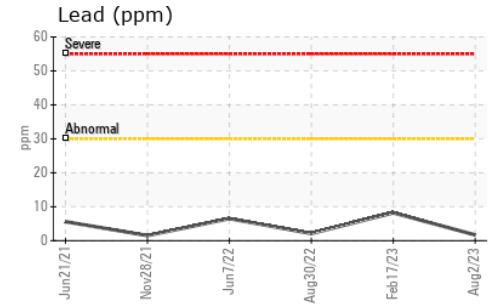
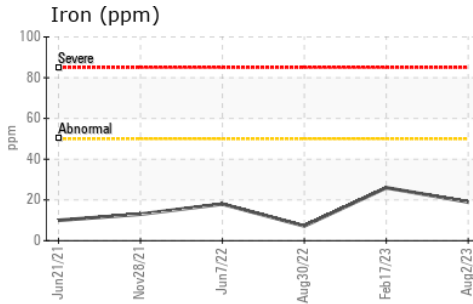
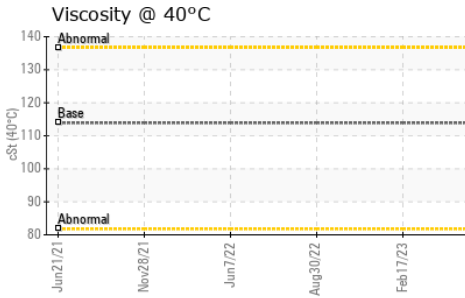
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	113.9	115	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	14.6	14.3
Viscosity Index (VI)	Scale	ASTM D2270*	142	129	---

GRAPHS



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 573 - Vancouver Hauling
Sample No. : GFL0084060 **Received** : 08 Sep 2023
Lab Number : 02581094 **Diagnosed** : 08 Sep 2023
Unique Number : 5642159 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: KV40, VI)

70 Golden Drive,
Coquitlam, BC
CA V3K 6B5
Contact: Catia Klagenberg Alves
cklagenbergalves@gflenv.com

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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F: