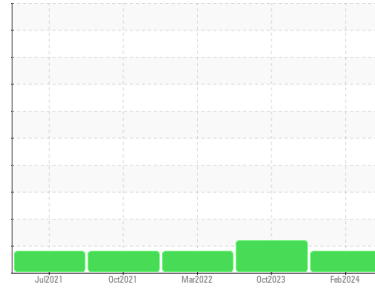




OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id
901096

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Light fuel dilution occurring. No other contaminants were detected 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	GFL0100601	GFL0077018	GFL0024426	
Sample Date	Client Info	15 Feb 2024	18 Oct 2023	27 Mar 2022	
Machine Age	hrs	Client Info	200717	11975	8342
Oil Age	hrs	Client Info	109427	1216	600
Oil Changed	Client Info	N/A	Changed	Changed	
Sample Status		MARGINAL	ABNORMAL	MARGINAL	

CONTAMINATION

method	limit/base	current	history1	history2	
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	0.0	0.0

WEAR METALS

method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185(m)	>110	50	84	38
Chromium	ppm	ASTM D5185(m)	>4	1	2	3
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>25	12	11	10
Lead	ppm	ASTM D5185(m)	>45	0	<1	0
Copper	ppm	ASTM D5185(m)	>85	3	4	4
Tin	ppm	ASTM D5185(m)	>4	0	0	<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)	0	2	2	3
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	58	62	60
Manganese	ppm	ASTM D5185(m)	0	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	923	957	997
Calcium	ppm	ASTM D5185(m)	1070	1032	1084	1032
Phosphorus	ppm	ASTM D5185(m)	1150	1023	950	1086
Zinc	ppm	ASTM D5185(m)	1270	1132	1200	1217
Sulfur	ppm	ASTM D5185(m)	2060	2650	2424	2610
Lithium	ppm	ASTM D5185(m)		<1	<1	0

CONTAMINANTS

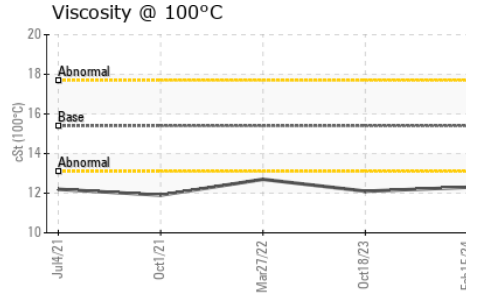
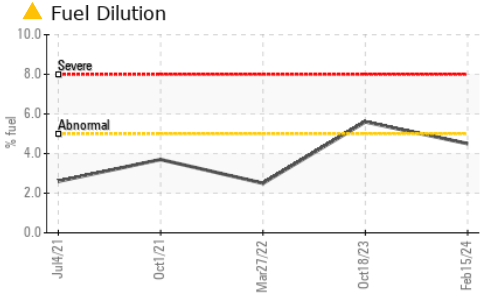
method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185(m)	>30	9	13	6
Sodium	ppm	ASTM D5185(m)		4	8	5
Potassium	ppm	ASTM D5185(m)	>20	3	5	9
Fuel	%	ASTM D7593*	>5	▲ 4.5	▲ 5.6	▲ 2.5

INFRA-RED

method	limit/base	current	history1	history2		
Soot %	%	ASTM D7844*	>3	1.1	1.5	0.4
Nitration	Abs/cm	ASTM D7624*	>20	12.6	12.9	10.3
Sulfation	Abs/1mm	ASTM D7415*	>30	21.3	26.7	20.6



OIL ANALYSIS REPORT



FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/1mm ASTM D7414*	>25	18.3	23.1	16.0

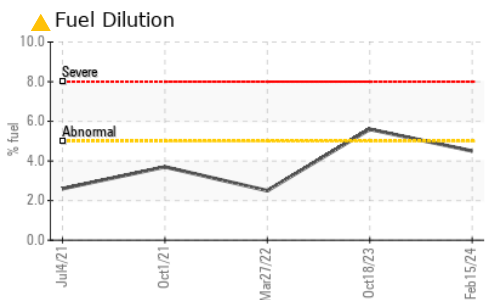
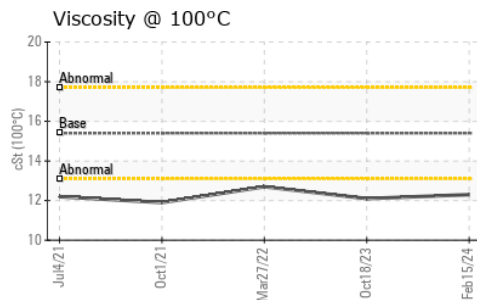
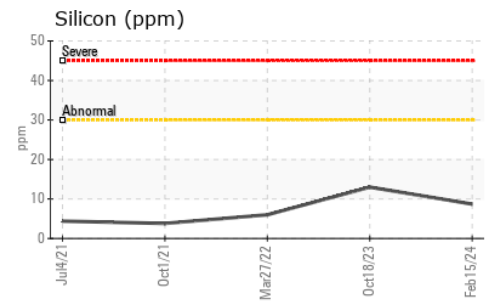
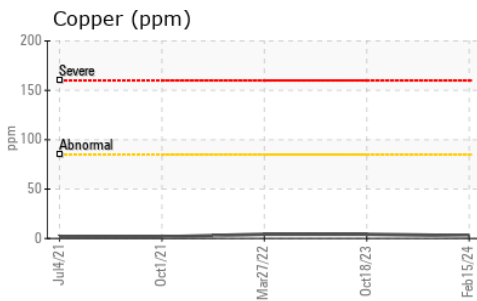
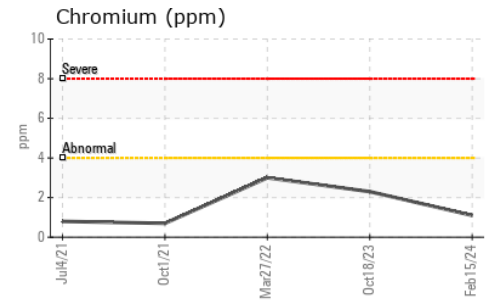
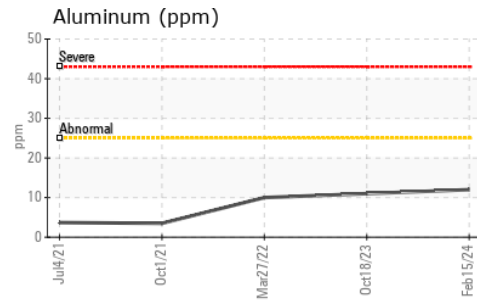
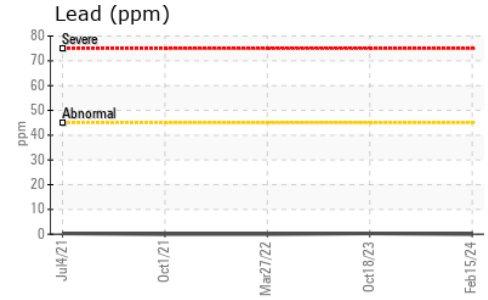
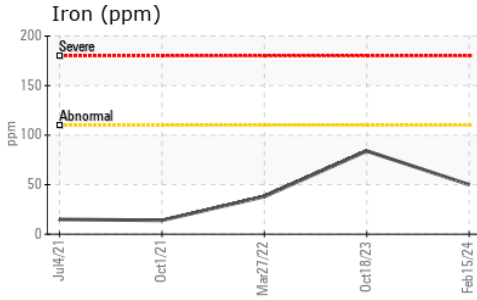
VISUAL

method	limit/base	current	history1	history2	
Emulsified Water	scalar Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar Visual*		NEG	NEG	NEG

FLUID PROPERTIES

method	limit/base	current	history1	history2	
Visc @ 100°C	cSt ASTM D7279(m)	15.4	12.3	▲ 12.1	12.7

GRAPHS



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0100601
Lab Number : 02616931
Unique Number : 5734041
Test Package : MOB 1 (Additional Tests: PercentFuel)

GFL Environmental - 575 - Squamish Hauling
 38950 Queens Way,
 Squamish, BC
 CA V8B 0K8
 Contact: Dean Imbeau
 dimbeau@gflenv.com
 T: (604)892-5604
 F: (604)892-5238

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.