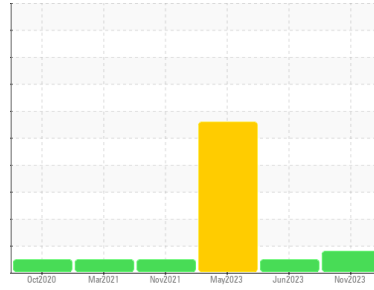




OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id
201101

Component
Diesel Engine

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

DIAGNOSIS

▲ Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time. Please specify the component make and model with your next sample.

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	GFL0092242	GFL0087375	GFL0056406
Sample Date	Client Info	15 Nov 2023	22 Jun 2023	31 May 2023
Machine Age	hrs	34966	34310	33285
Oil Age	hrs	600	1000	452
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		MARGINAL	NORMAL	ABNORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.2	NEG	NEG	NEG
Glycol	WC Method	NEG	NEG	▲ 0.01

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185(m) >100	32	15	55
Chromium	ppm ASTM D5185(m) >20	1	<1	2
Nickel	ppm ASTM D5185(m) >4	<1	<1	<1
Titanium	ppm ASTM D5185(m)	0	0	<1
Silver	ppm ASTM D5185(m) >3	0	0	0
Aluminum	ppm ASTM D5185(m) >20	1	<1	2
Lead	ppm ASTM D5185(m) >40	2	1	3
Copper	ppm ASTM D5185(m) >330	4	3	8
Tin	ppm ASTM D5185(m) >15	0	0	<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	5	3	2
Barium	ppm ASTM D5185(m) 0	0	0	0
Molybdenum	ppm ASTM D5185(m) 60	57	56	60
Manganese	ppm ASTM D5185(m) 0	0	<1	<1
Magnesium	ppm ASTM D5185(m) 1010	904	907	938
Calcium	ppm ASTM D5185(m) 1070	1040	1034	1071
Phosphorus	ppm ASTM D5185(m) 1150	968	1023	1062
Zinc	ppm ASTM D5185(m) 1270	1142	1129	1177
Sulfur	ppm ASTM D5185(m) 2060	2428	2503	2542
Lithium	ppm ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

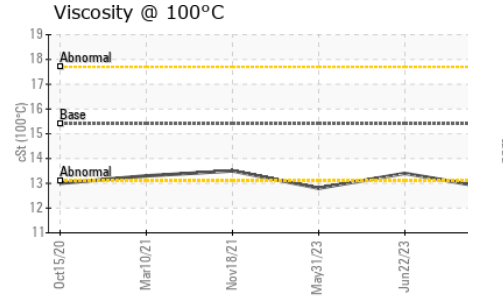
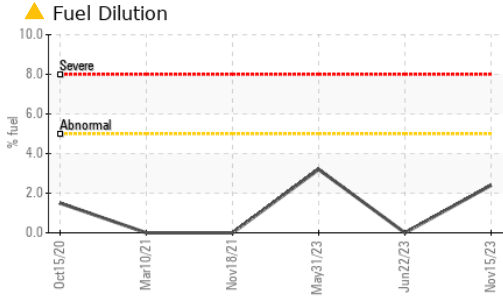
method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >25	3	3	4
Sodium	ppm ASTM D5185(m)	11	14	▲ 35
Potassium	ppm ASTM D5185(m) >20	1	2	▲ 6
Fuel	% ASTM D7593* >5	▲ 2.4	<1.0	▲ 3.2

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% ASTM D7844* >3	0.2	0	0.1
Nitration	Abs/cm ASTM D7624* >20	6.6	5.4	8.4
Sulfation	Abs./1mm ASTM D7415* >30	19.4	18.1	19.4



OIL ANALYSIS REPORT

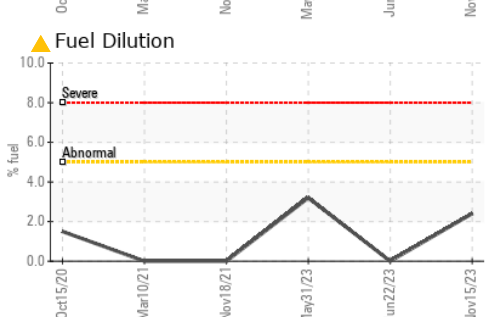
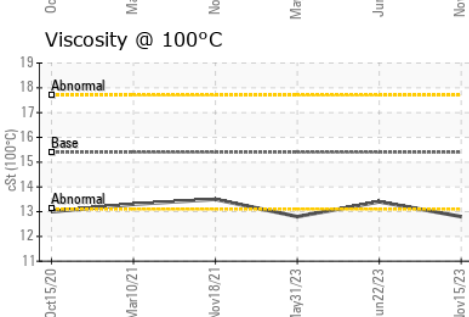
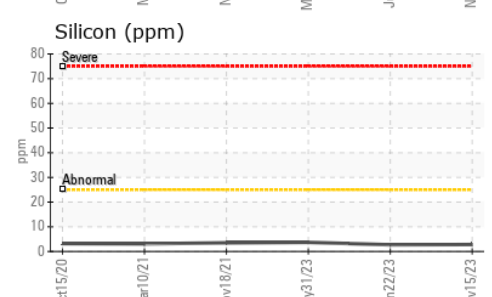
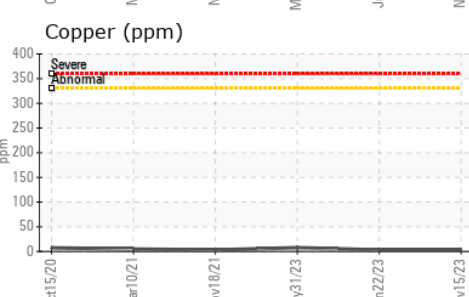
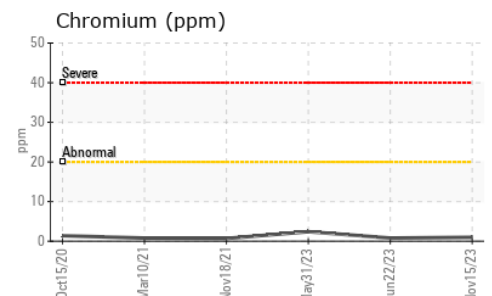
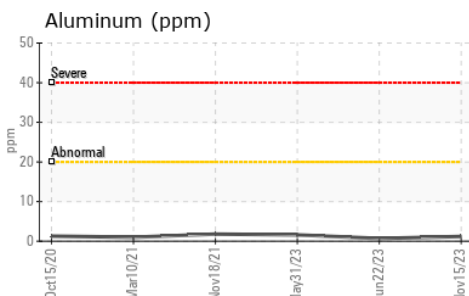
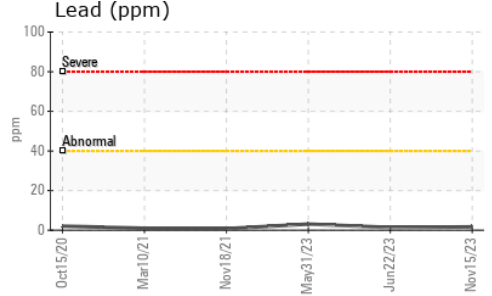
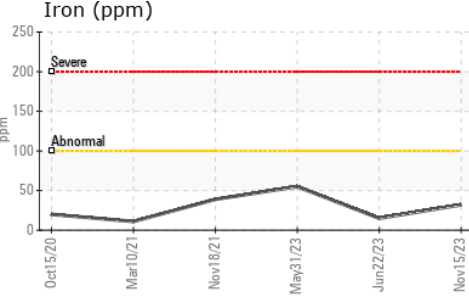


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	14.6	13.7	16.2

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	12.8	13.4	12.8

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 720 - Lafleche - Landfill
Sample No. : GFL0092242 **Received** : 20 Nov 2023 17125 Lafleche Road,
Lab Number : 02597355 **Diagnosed** : 21 Nov 2023 Moose Creek, ON
Unique Number : 5682435 **Diagnostician** : Wes Davis CA K0C 1W0
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel) Contact: Charles Bergeron
 To discuss this sample report, contact Customer Service at 1-800-268-2131. cbergeron@gflenv.com
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. T: (613)538-4853
 Validity of results and interpretation are based on the sample and information as supplied. F: