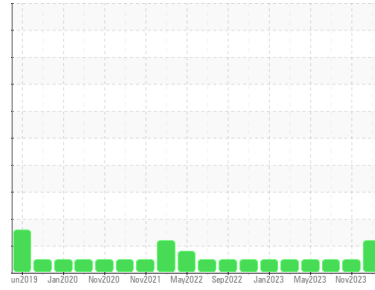




OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id
801188

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (20 LTR)

DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Fluid Condition

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0110733	GFL0097454	GFL0085685
Sample Date	Client Info	20 Feb 2024	27 Nov 2023	05 Sep 2023
Machine Age	hrs	5982	5982	5982
Oil Age	hrs	5982	5982	5982
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		ABNORMAL	NORMAL	NORMAL

CONTAMINATION

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

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185(m) >100	16	13	15
Chromium	ppm ASTM D5185(m) >20	<1	<1	<1
Nickel	ppm ASTM D5185(m) >4	<1	<1	0
Titanium	ppm ASTM D5185(m)	0	0	0
Silver	ppm ASTM D5185(m) >3	0	<1	0
Aluminum	ppm ASTM D5185(m) >20	2	1	<1
Lead	ppm ASTM D5185(m) >40	<1	0	0
Copper	ppm ASTM D5185(m) >330	1	1	1
Tin	ppm ASTM D5185(m) >15	0	0	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) 0	2	2	2
Barium	ppm ASTM D5185(m) 0	0	<1	0
Molybdenum	ppm ASTM D5185(m) 60	55	57	56
Manganese	ppm ASTM D5185(m) 0	0	0	<1
Magnesium	ppm ASTM D5185(m) 1010	888	931	907
Calcium	ppm ASTM D5185(m) 1070	979	1020	983
Phosphorus	ppm ASTM D5185(m) 1150	931	976	956
Zinc	ppm ASTM D5185(m) 1270	1106	1175	1134
Sulfur	ppm ASTM D5185(m) 2060	2389	2395	2304
Lithium	ppm ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

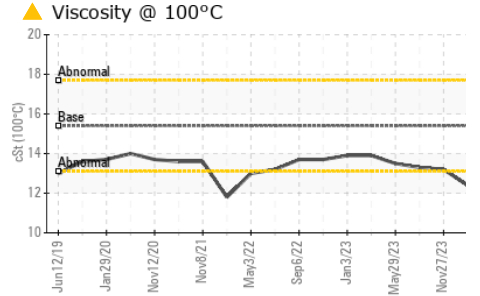
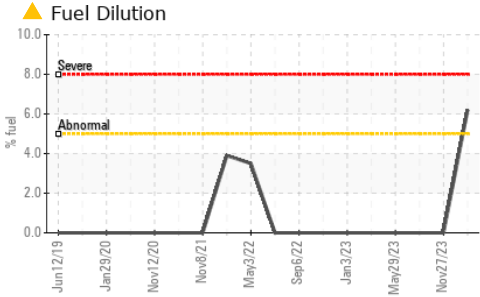
method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >25	4	4	4
Sodium	ppm ASTM D5185(m)	1	2	2
Potassium	ppm ASTM D5185(m) >20	2	<1	<1
Fuel	% ASTM D7593* >5	▲ 6.2	<1.0	<1.0

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% ASTM D7844* >3	0.5	0.4	0.5
Nitration	Abs/cm ASTM D7624* >20	10.4	9.6	10.9
Sulfation	Abs/.1mm ASTM D7415* >30	21.1	20.7	22.6



OIL ANALYSIS REPORT

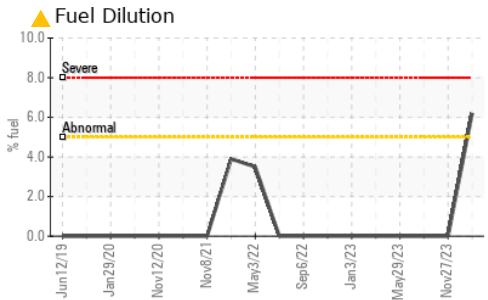
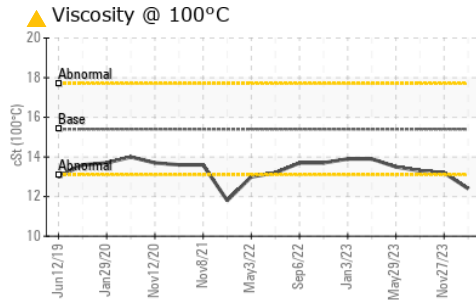
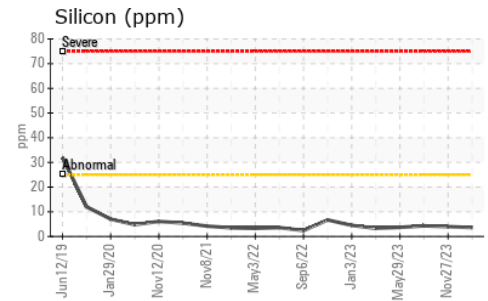
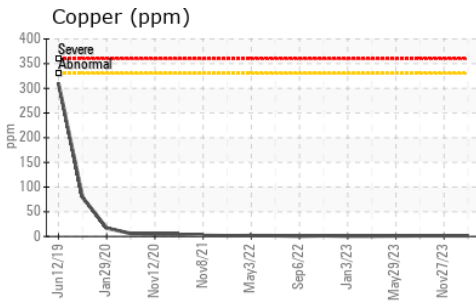
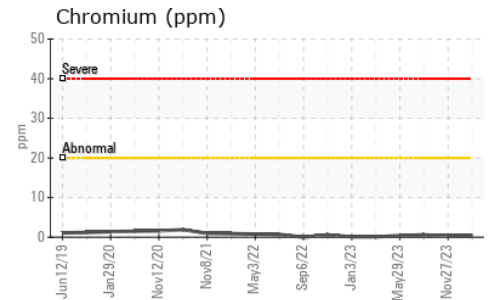
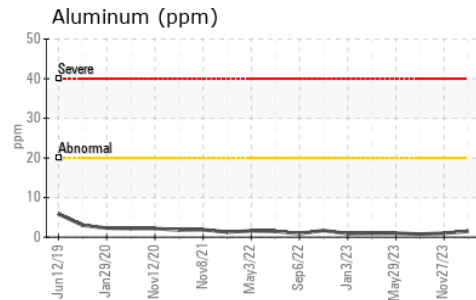
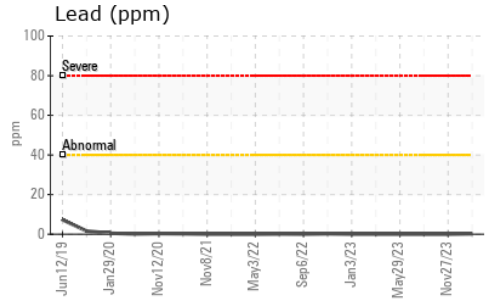
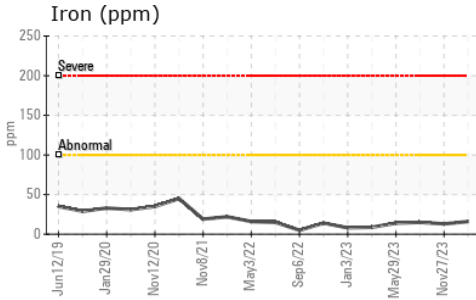


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	19.2	17.8	18.6

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	▲ 12.4	13.2	13.3

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0110733 **Received** : 22 Feb 2024
Lab Number : **02617396** **Tested** : 23 Feb 2024
Unique Number : 5734506 **Diagnosed** : 23 Feb 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 221 - Windsor
 905 Tecumseh Road W
 Windsor, ON
 CA N8W 4J5
 Contact: Rhys Marotte
 rmarotte@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: