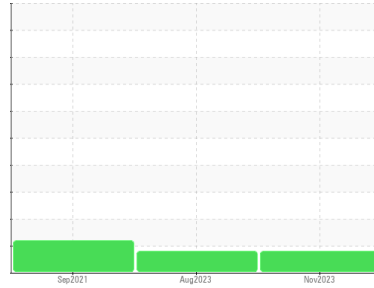




OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id
OR1022

Component
Diesel Engine

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

DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.

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

The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			GFL0092245	GFL0087366	GFL0030486
Sample Date	Client Info			15 Nov 2023	02 Aug 2023	22 Sep 2021
Machine Age	hrs	Client Info		14944	14483	12975
Oil Age	hrs	Client Info		500	500	500
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

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	36	43	56
Chromium	ppm	ASTM D5185(m)	>20	<1	1	2
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	<1	0
Silver	ppm	ASTM D5185(m)	>3	<1	0	0
Aluminum	ppm	ASTM D5185(m)	>20	2	1	1
Lead	ppm	ASTM D5185(m)	>40	8	10	8
Copper	ppm	ASTM D5185(m)	>330	11	12	4
Tin	ppm	ASTM D5185(m)	>15	<1	1	<1
Antimony	ppm	ASTM D5185(m)		0	0	0
Vanadium	ppm	ASTM D5185(m)		0	<1	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0

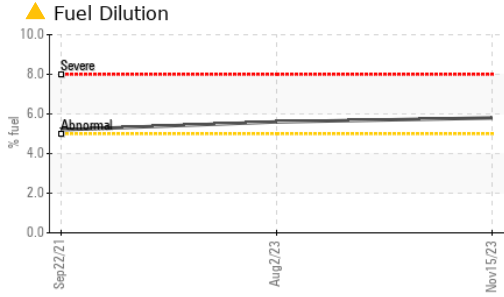
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	5	5	3
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	60	65	58
Manganese	ppm	ASTM D5185(m)	0	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	979	999	986
Calcium	ppm	ASTM D5185(m)	1070	1121	1208	1072
Phosphorus	ppm	ASTM D5185(m)	1150	1000	1053	1018
Zinc	ppm	ASTM D5185(m)	1270	1203	1227	1195
Sulfur	ppm	ASTM D5185(m)	2060	2447	2355	2388
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	3	4	5
Sodium	ppm	ASTM D5185(m)		2	1	4
Potassium	ppm	ASTM D5185(m)	>20	0	0	3
Fuel	%	ASTM D7593*	>5	▲ 5.8	▲ 5.6	▲ 5.2

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0.7	0.5	1
Nitration	Abs/cm	ASTM D7624*	>20	10.4	9.6	11.6
Sulfation	Abs./1mm	ASTM D7415*	>30	25.5	24.5	26.7



OIL ANALYSIS REPORT



FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/1mm ASTM D7414*	>25	22.3	20.2 23.6

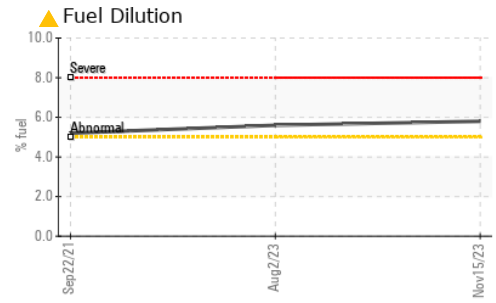
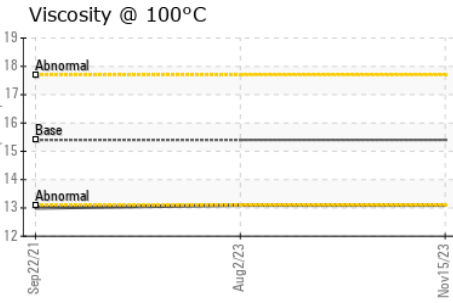
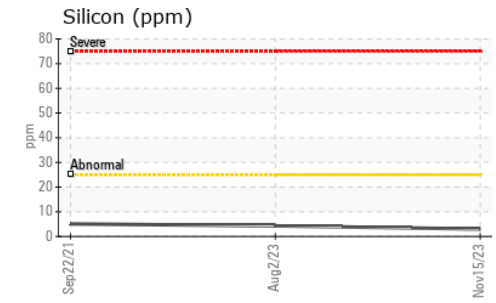
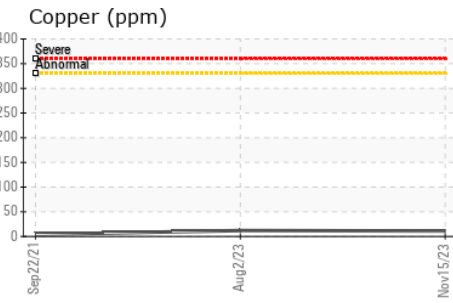
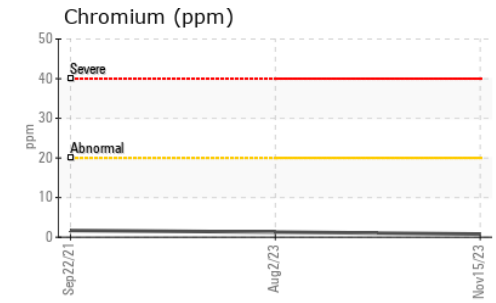
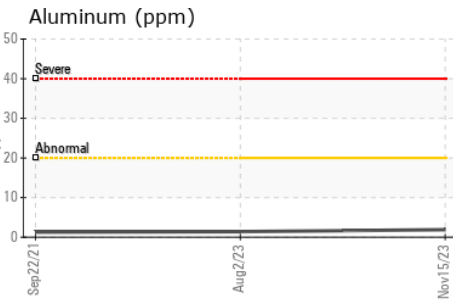
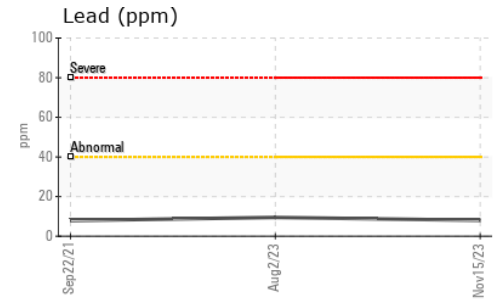
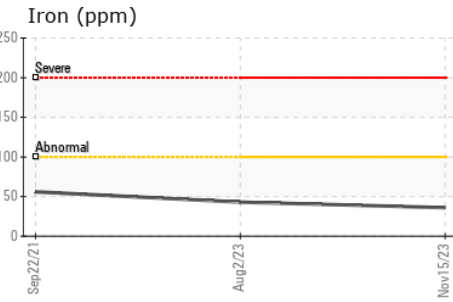
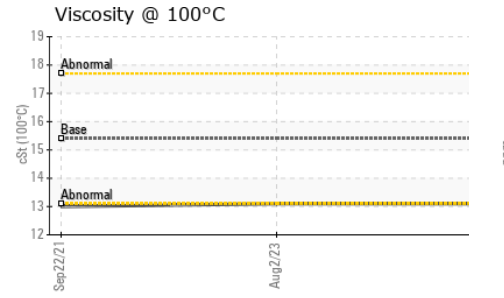
VISUAL

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	13.1	▲ 13.0

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 720 - Lafleche - Landfill
Sample No. : GFL0092245 **Received** : 20 Nov 2023 17125 Lafleche Road,
Lab Number : 02597354 **Diagnosed** : 21 Nov 2023 Moose Creek, ON
Unique Number : 5682434 **Diagnostician** : Wes Davis CA K0C 1W0
Test Package : MOB 1 (Additional Tests: PercentFuel)
 Contact: Charles Bergeron
 cbergeron@gflenv.com
 T: (613)538-4853
 F:

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.